

ILLEGIB

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DECLASSIFICATION REVIEW by NIMA/DOD 3/22/00

TCS 1813/64-KH
M/EB 211/64
17 April 1964
Copy 1

MEMORANDUM FOR: Chief, Military-Economics Division, ORR

ATTENTION: [REDACTED] 25X1A

THROUGH: Chief, Requirements Branch, Reconnaissance Group, CGS

FROM: Chief, CIA/PID (NPIC)

SUBJECT: Construction Progress at Incomplete Hardened MREM and IREM Launch Areas in the USSR

REFERENCES: (a) Requirement C-RR-4-81,146
(b) CIA/PID Project C 480-64

1. This memorandum is in response to your requirement dated 6 March 1964 which requests a detailed examination of the construction progress at twelve incomplete hardened MREM and IREM launch areas in the USSR. These twelve launch areas constitute all of the known Soviet facilities of this type that had not yet been completed as of the last KEYHOLE coverage of them. A few of these are known to have been under construction longer than the eighteen months estimated to be necessary for completion of hardened MREM and IREM launch areas. Of the installations under consideration in this memorandum, ten are IREM launch areas and two are in the MREM category. A total of twenty hardened IREM launch areas and twenty-one hardened MREM launch areas have been identified to date in the USSR.

2. After detailed interpretation and study of all KEYHOLE coverages of these installations the following summation can be made.

a. Of the ten incomplete IREM launch areas, construction appears to have progressed toward a normal completion at the following eight:

- (1) Aktyubinsk IREM Launch Area 1
- (2) Aktyubinsk IREM Launch Area 2
- (3) Granov IREM Launch Area 2
- (4) Granov IREM Launch Area 3
- (5) Novosysoyevka IREM Launch Area 2
- (6) Novosysoyevka IREM Launch Area 3
- (7) Sary Ozek IREM Launch Area 3
- (8) Smorgen IREM Launch Area 3

Line drawings of consecutive coverages of these sites are included herein as attachments and they graphically indicate construction progress as recorded on photography. No further textual description of these eight launch areas will be

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GROUP 1
Excluded from automatic
downgrading and
declassification

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MREM and IREM Launch Areas in the USSR

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made in this memorandum as it appears that their construction progress is normal. There is definite evidence of a construction slowdown at two of the IREM launch areas (Taybola IREM Launch Area 3 and Nigrande IREM Launch Area 3) and these will be discussed in detail in this memorandum.

b. Two other MREM installations exhibit some features to be considered questionable. There is some evidence of a construction slowdown at Ostrov MREM Launch Area 3 while only inconclusive evidence is available at the other, Postavy MREM Launch Area 3. These two sites are also described in detail in this memorandum.

3. The following detailed discussion of the aforementioned sites parallels the graphic description contained in the line drawings included as attachments to this memorandum. The reader should be cautioned in the use of the attached graphics in that when an item is portrayed as being "first observed" on one of the line drawings it may actually have been present on an earlier coverage but not discernible because of photographic quality or some other limiting factor. This is especially true for such items as fence lines and small structures. In the textual description of specific launch areas the relative photo quality and interpretability of different coverages will be indicated.

a. Taybola IREM Launch Area 3 (Figures X-a through X-g): This hardened IREM launch area remains in an early stage of construction two years after it was initially observed in [REDACTED]. This was the first coverage of the area on KEYHOLE photography, thus making the photographic negation of this construction activity impossible. Since then it has been covered by KEYHOLE photography on seven different occasions, most recently in [REDACTED] on excellent quality [REDACTED]. The two other launch areas at this complex were completed in a normal period of time while construction at this site appeared to start as expected, however, site development did not continue past an early stage. The site support facility progressed at a fairly steady pace with some structures being added as recently as the last half of [REDACTED] whereas the launch site remains basically as it was at the end of [REDACTED] consisting only of three excavations and a few construction support buildings within a fenced area.

The best photo coverages of this launch area were in [REDACTED] Figure X-g). On the latest coverage the road up to the launch site had been at least partially cleared of snow but there was no sign of any activity within the fenced area. A line of probable tents or tent bases first observed in [REDACTED] and definitely still present in [REDACTED] had been removed at the time of this latest photography. No vehicles or other signs of activity were discernible at the site support facility on this [REDACTED]. Photo evidence indicates that there has been at least a construction slowdown at this launch area and possibly even a complete cessation of activity.

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- b. Nigrande IREM Launch Area 3 (Figures V-a through V-f): Construction of this launch area had not yet started when the vicinity was covered by KEYHOLE photography in [REDACTED] however, the nearby soft IREM launch area was complete, and the other hardened launch areas was well into an early stage of construction at that time. Subsequently, Nigrande IREM Launch Area 3 has been observed seven times and the launch site remained in a probable early stage of construction when last covered in [REDACTED] This was fifteen months after construction activity was first observed. Although none of the photographic coverages of this launch site can be classified as excellent, fairly good photography was obtained in [REDACTED] During these coverages the site support facility has steadily increased in size but at no time have any structures been apparent in the excavation at the launch site. It is felt that the available evidence points to a construction slowdown at this launch site but due to the quality of photography it is not as persuasive as that described at Taybola IREM Launch Area 3.
- c. Ostrov MREM Launch Area 3 (Figures XI-a through XI-f): Construction of this hardened MREM launch area was underway when the area was first observed on KEYHOLE photography in [REDACTED] At the time of the latest coverage in [REDACTED] over two years after the initial observation, the launch site was in a mid-stage of construction. During this time, construction at both the launch site and the site support facility appears to have progressed continuously, although not as rapidly as that at other hardened MREM launch areas. Of the six different observations of this launch area, those obtained in [REDACTED] are of good quality, the remaining coverages being of marginal value. The photo evidence indicates that construction is continuing at this launch area but, at a slower pace that observed at other installations of this type.
- d. Postavy MREM Launch Area 3 (Figures XII-a through XII-d): This launch area has been observed only three times on KEYHOLE photography and it was well into a mid-stage of construction when the area was first covered in [REDACTED] It was covered again in [REDACTED] but no significant details were discernible due to poor photo quality. When last covered in [REDACTED] the site remained in a mid-stage of construction and the site support facility had been significantly expanded. This being all of the information available on this launch area, no definite statement can be made as to whether or not construction has progressed as rapidly as at other hardened MREM launch areas. Conversely, there is no evidence to indicate that construction slowdown has taken place.

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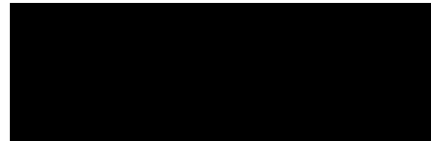


25X1A

4. The photo analyst on this project is [REDACTED] who may be contacted on extension 2079 should you have any further questions concerning this project.

5. This project is considered to be complete.

25X1A



Enclosures:

- 1 - Twelve line drawings - 64 pages
(CIA/PID/MEB-P-369/64 thru P-380/64)

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PHOTO COVERAGE BY MISSION AND STATUS OF CONSTRUCTION

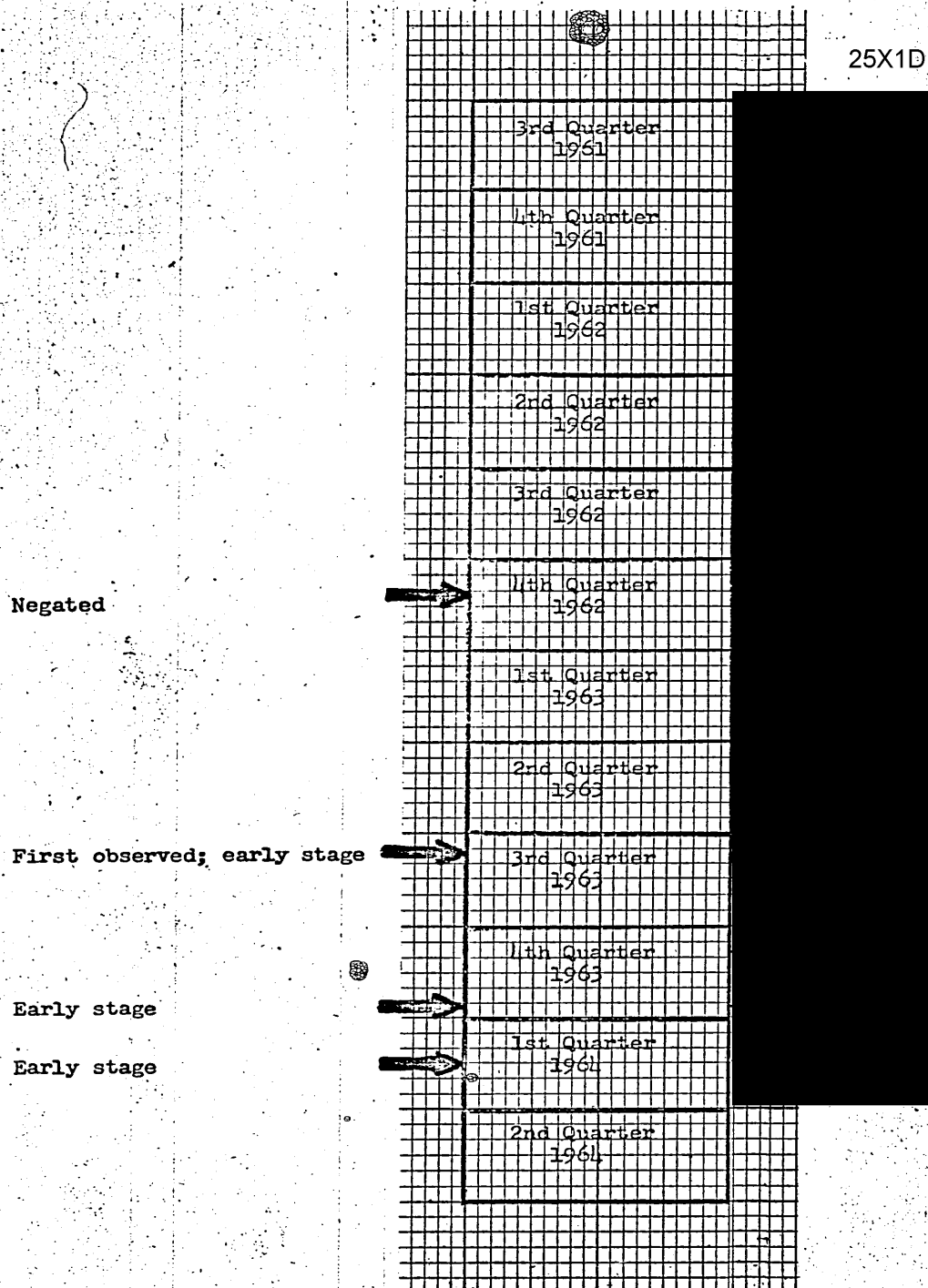


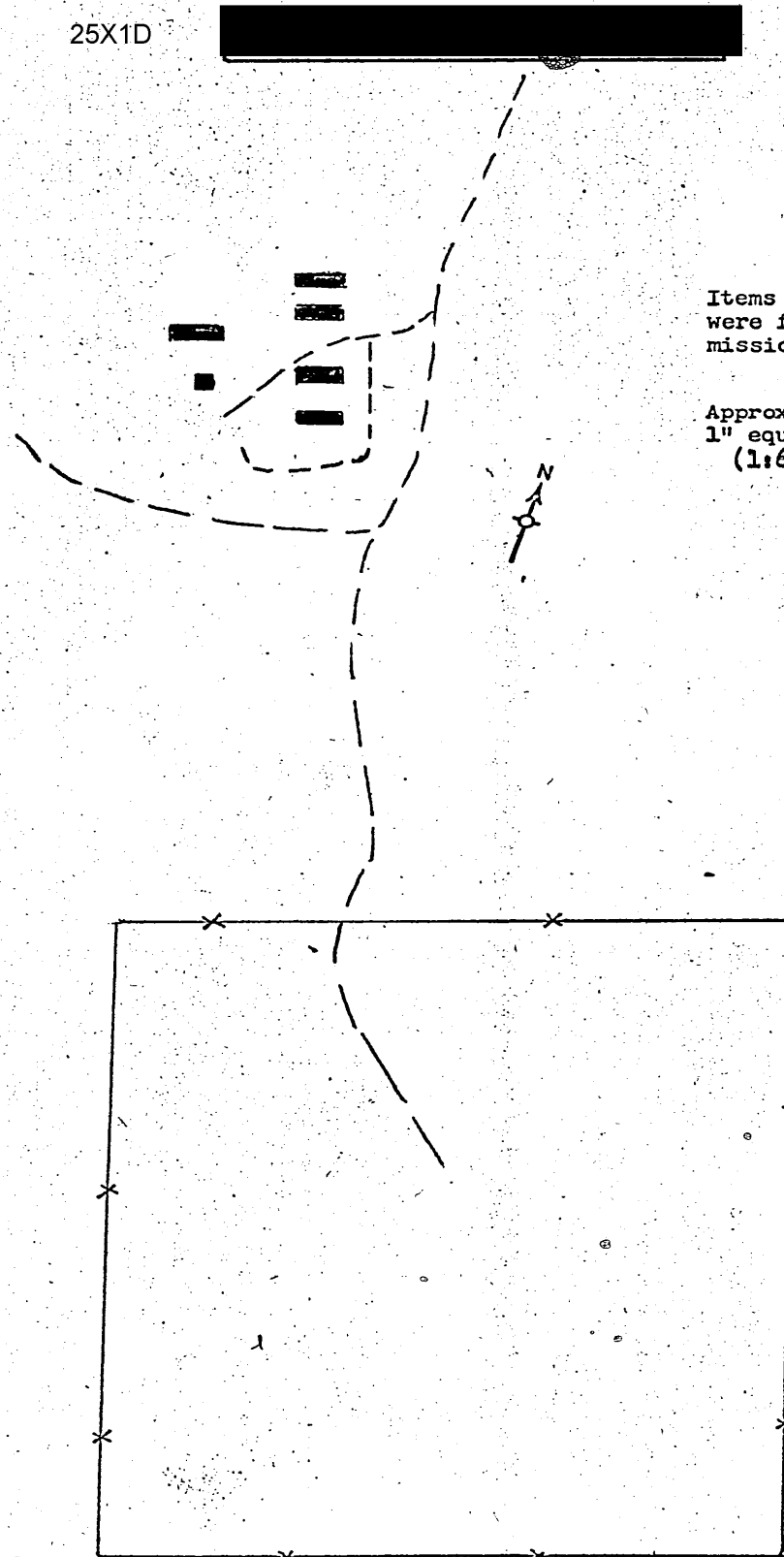
Figure I-a

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AKTYUBINSK IREM LAUNCH AREA #1 (KARAKHOBDA)
49-57-45N 56-51-20E

25X1D



Items accentuated in black
were first observed on this
mission.

Approximate scale:
1" equals 500'
(1:6000)

Figure I-b

TOP SECRET RUFF

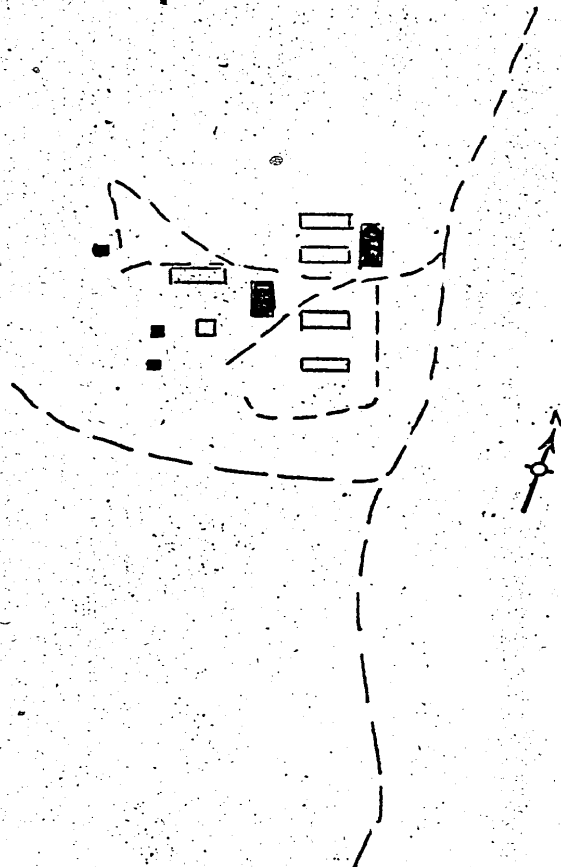
CIA/PID/MEB-P-369/64

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AKTYUBINSK ICBM LAUNCH AREA #1 (KARAKHOBDA)
49-57-15N 56-51-20E

25X1D



Items accentuated in black
were first observed on this
mission.

Approximate scale:
1" equals 500'
(1:6000)

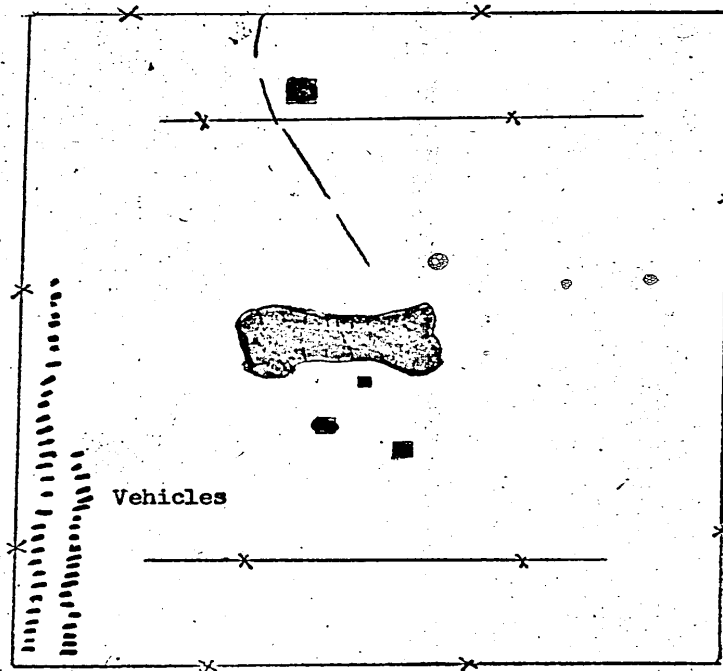


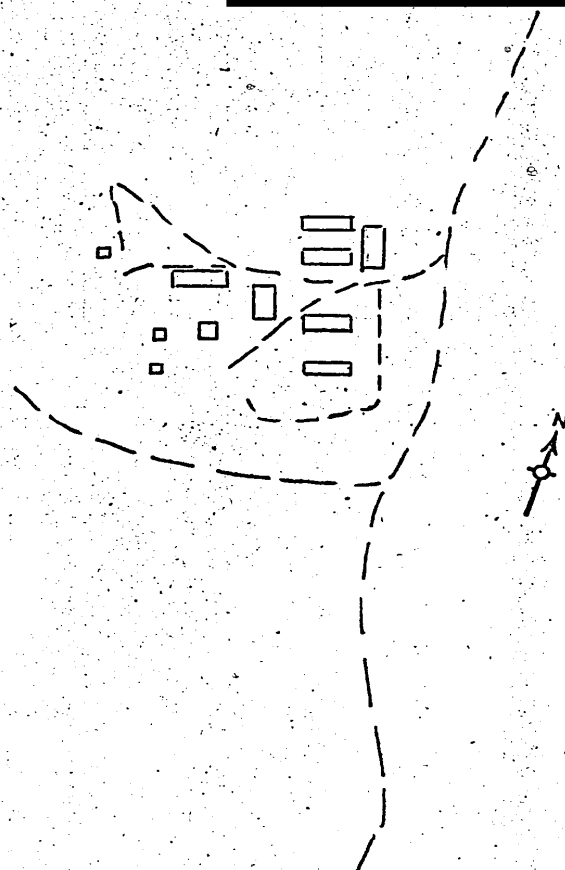
Figure I-c

TOP SECRET RUFF

CIA/PID/MEB-P-369/64

AKTYUBINSK IRBM LAUNCH AREA #1 (KARAKHOBDA)
49-57-45 56-51-20E

25X1D



Items accentuated in black
were first observed on this
mission.

Approximate scale:
1" equals 500'
(1:6000)

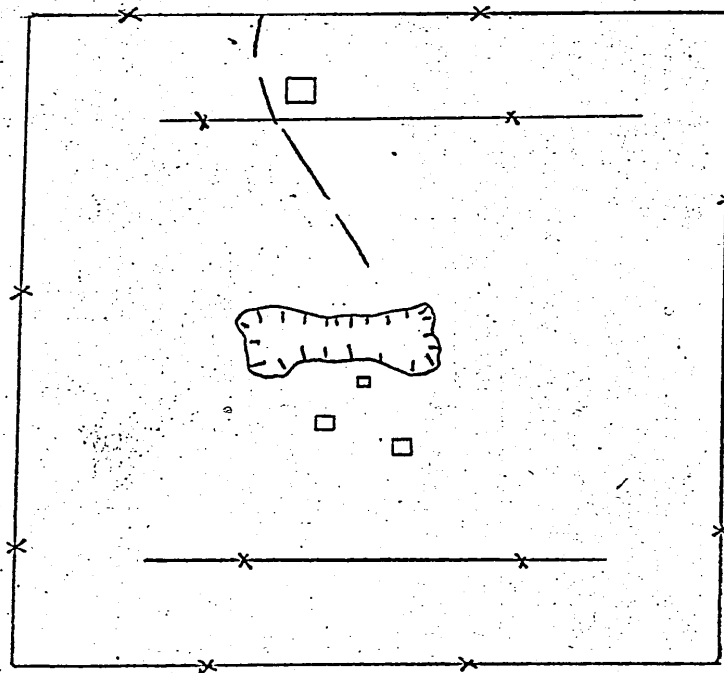


Figure I-d

TOP SECRET RUFF

CIA/PID/MEB-P-369/64

AKTYUBINSK IRBM LAUNCH AREA #2 (PETROVSKIY)
49-57-45N 56-21-20E

PHOTO COVERAGE BY MISSION AND STATUS OF CONSTRUCTION

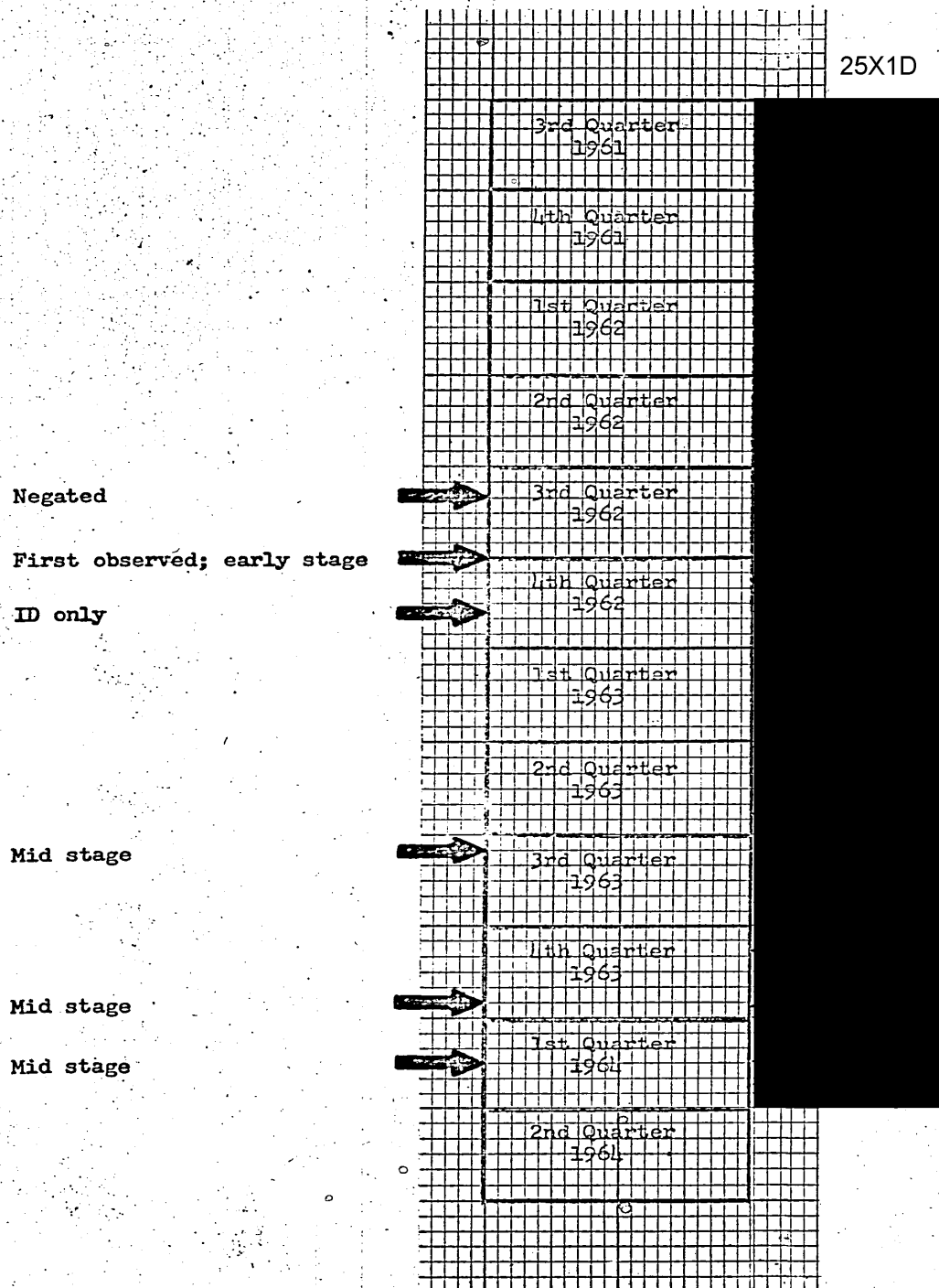


Figure II-a

AKTYUBINSK IREM LAUNCH AREA #2 (PETROVSKIY)
49-57-45N 56-21-20E

25X1D

Items accentuated in black
were first observed on this
mission.

Approximate scale:
1" equals 500'
(1:6000)

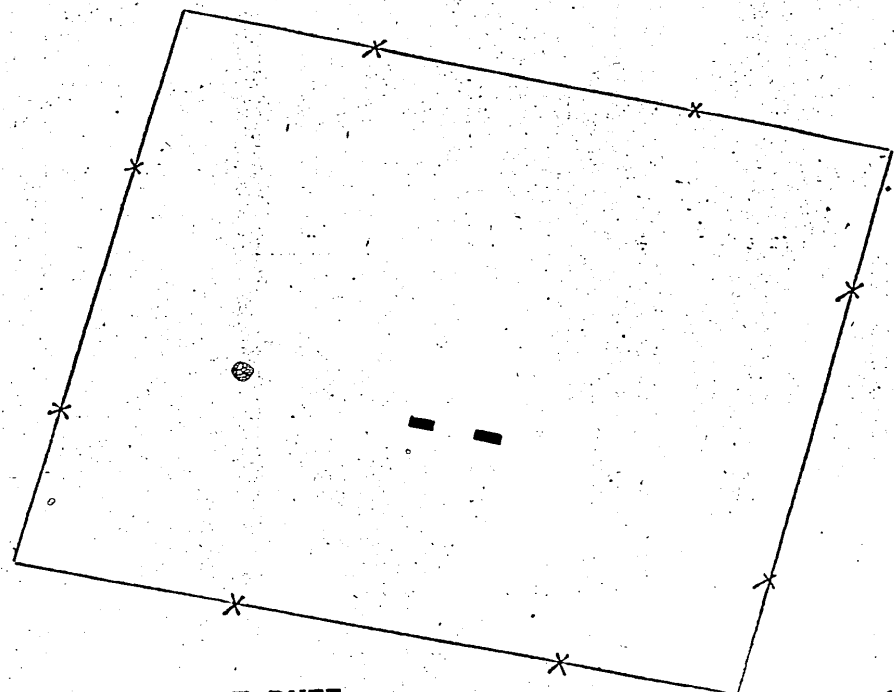


Figure II-b

AKTYUBINSK IREB LAUNCH AREA #2 (PETROVSKIY)
49-57-45N 56-21-20E

25X1D

Items accentuated in black
were first observed on this
mission.

Approximate scale:
1" equals 500'
(1:6000)

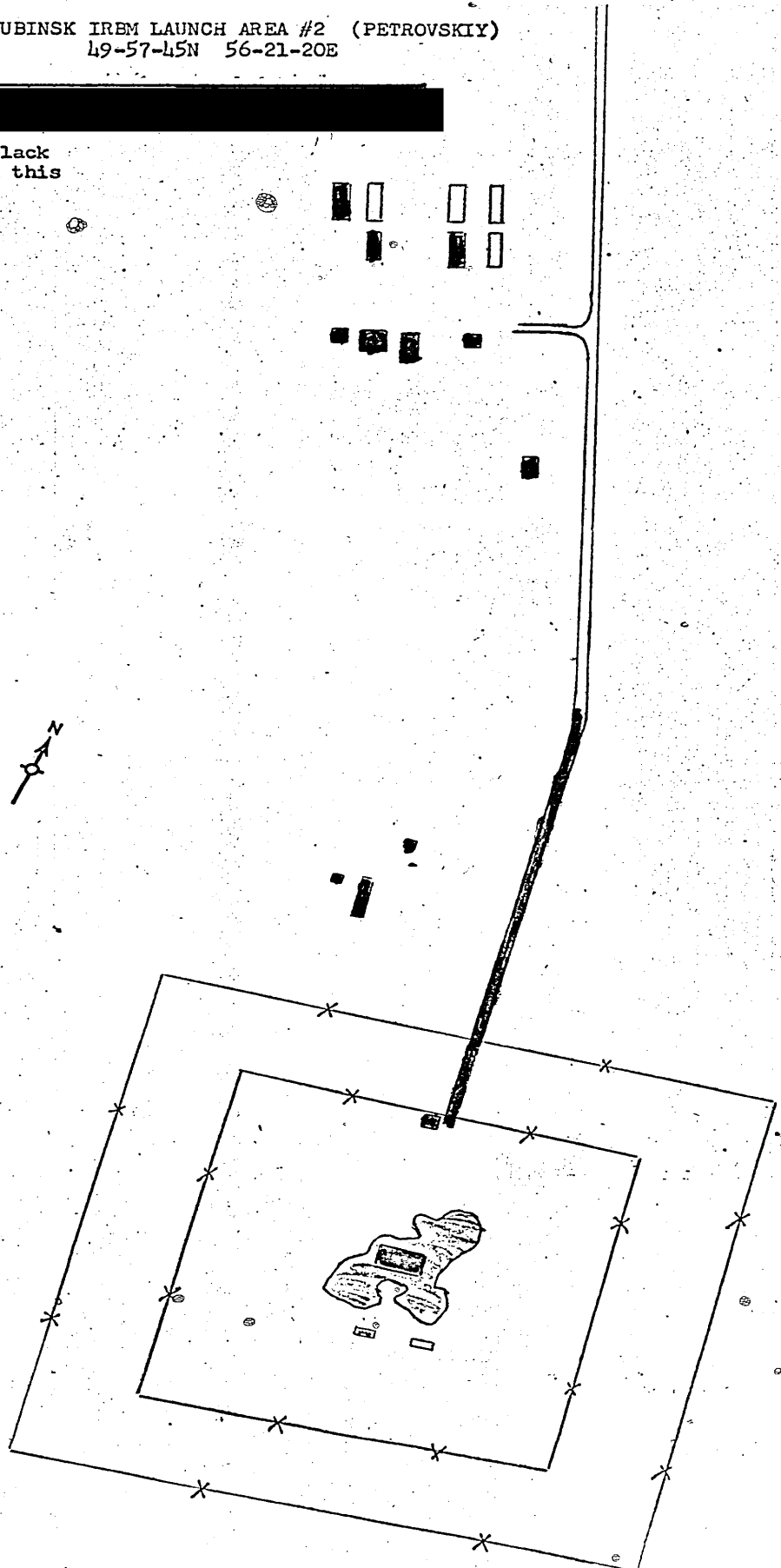


Figure II-c

AKTYUBINSK IREM LAUNCH AREA #2 (PETROVSKIY)
49-57-45N 56-21-20E

25X1D

Items accentuated in black
were first observed on this
mission.

Approximate scale:
1" equals 500'
(1:6000)

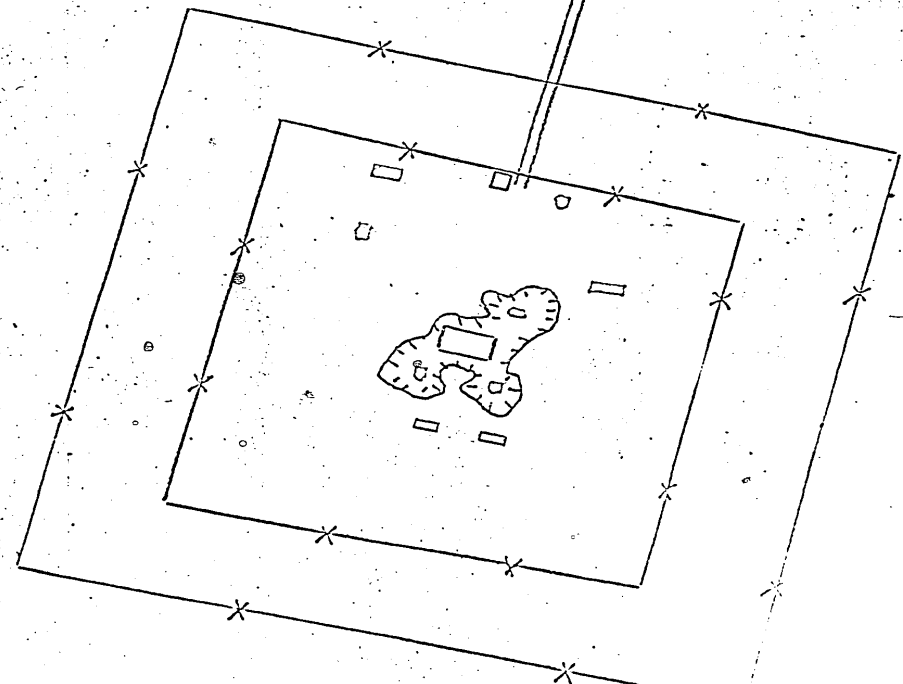
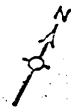


Figure II-d

AKTYUBINSK IREM LAUNCH AREA #2 (PETROVSKIY)
49-57-45N 56-21-20E

25X1D

Items accentuated in black
were first observed on this
mission.

Approximate scale:
1" equals 500'
(1:6000)

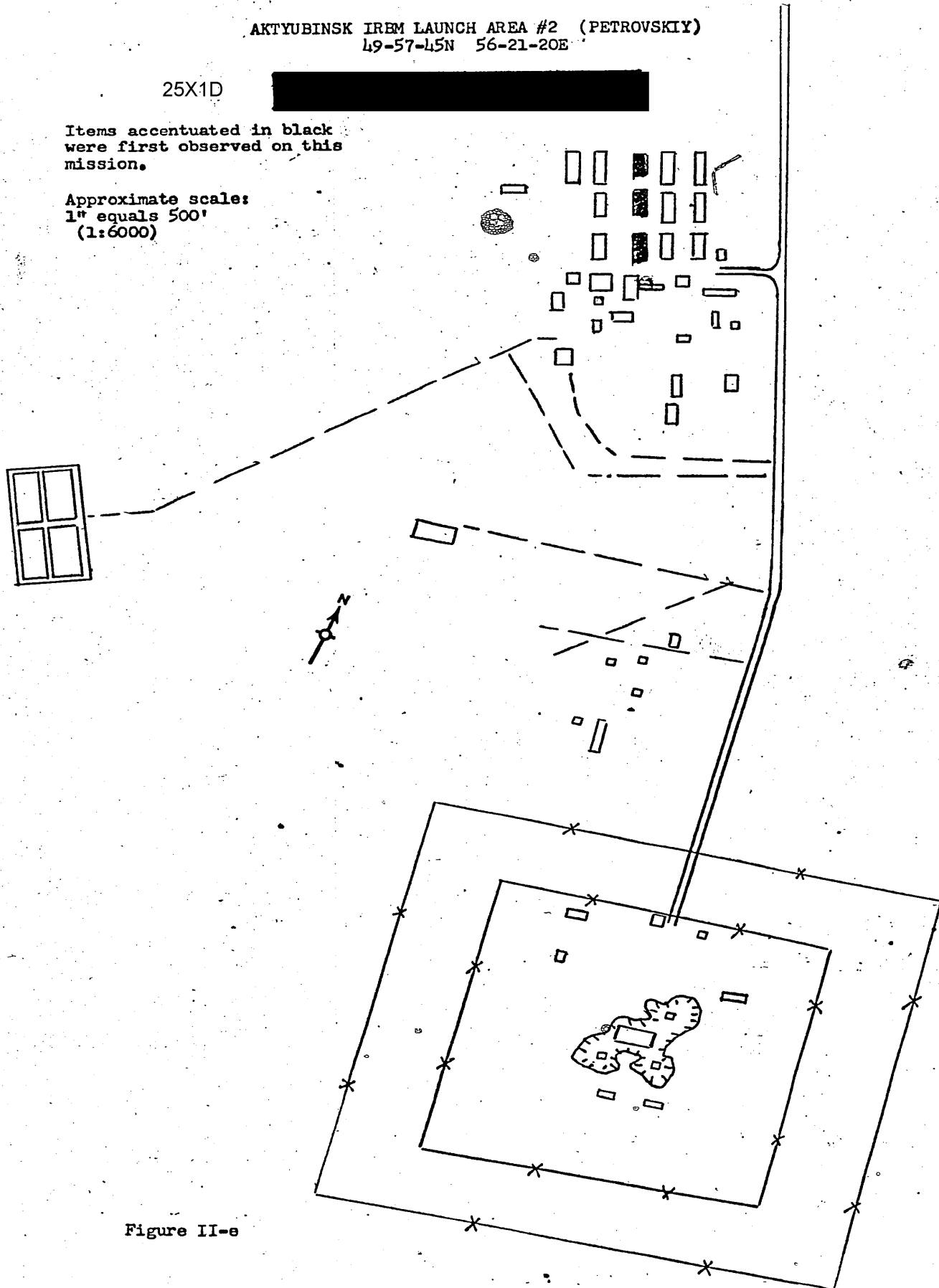


Figure II-e

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GRANOV IRBM LAUNCH AREA #2

48-49-30N 29-29-15E

PHOTO COVERAGE BY MISSION AND STATUS OF CONSTRUCTION

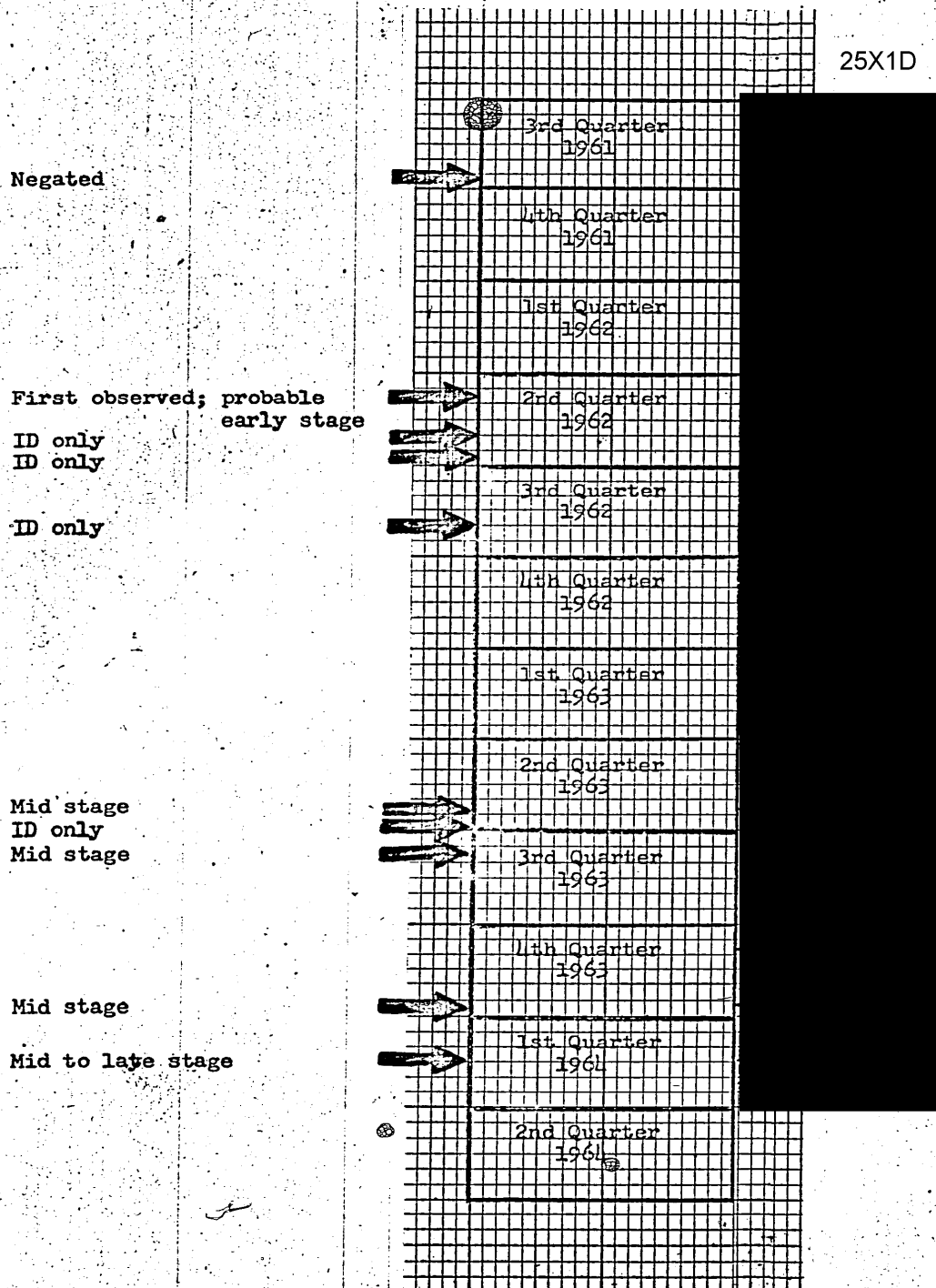


Figure III-A

TOP SECRET RUFF

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CIA/PID/MEB-P-371/64

TOP SECRET RUFF
GRANOV IRBM LAUNCH AREA #2
48-49-30N 29-29-15E

Launch area ID only on this mission due to small scale of photography.

Items accentuated in black were first observed on this mission.

Approximate scale:
1" equals 500'
(1:6000)

25X1D

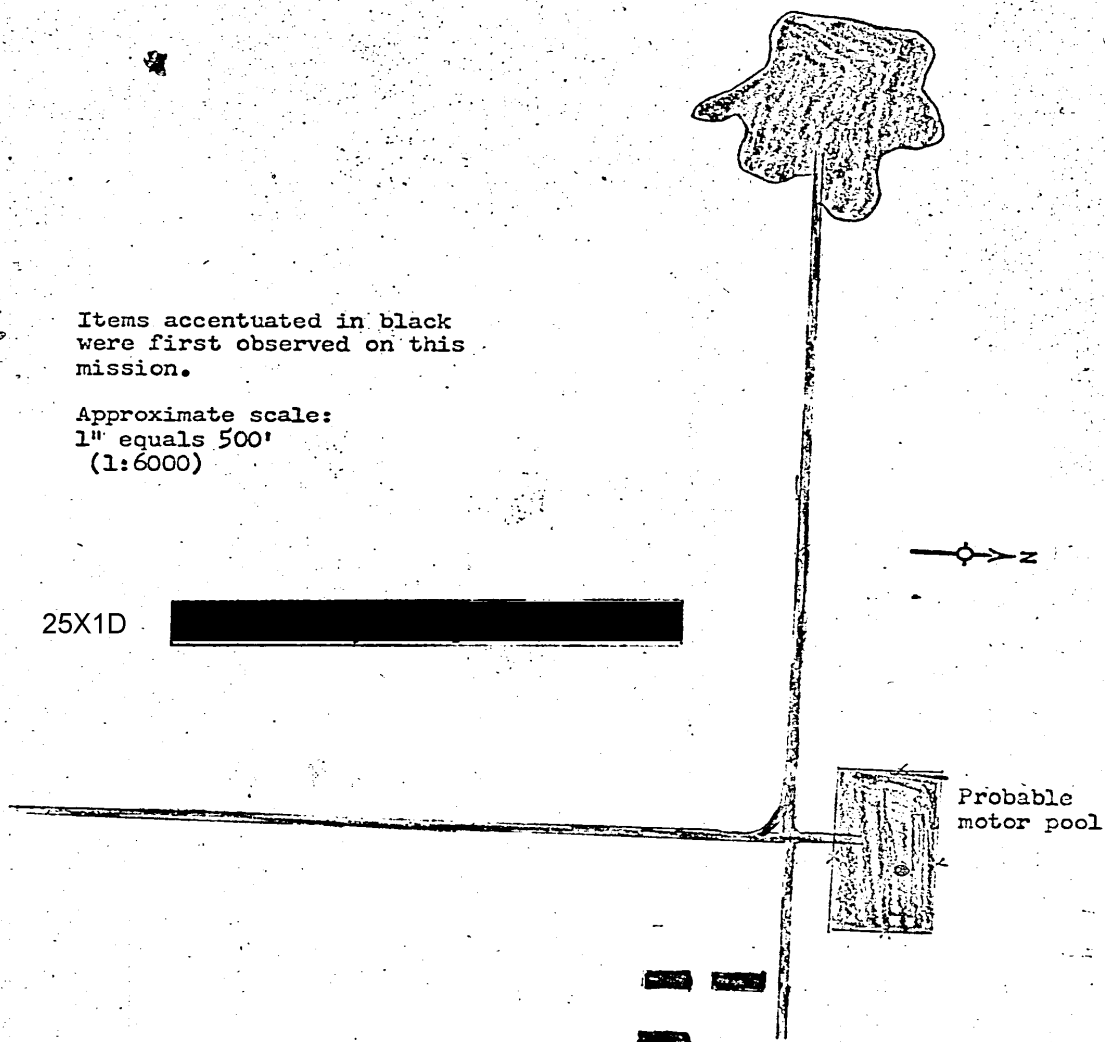


Figure III-b

TOP SECRET RUFF

CIA/PID/MEB-P-371/64

TOP SECRET RUFF

GRANOV IRBM LAUNCH AREA #2
48-49-30N 29-29-15E

Items accentuated in black
were first observed on this
mission.

Approximate scale:
1" equals 500'
(1:6000)

25X1D



Probable
motor pool

Figure III-c

TOP SECRET RUFF

GRANOV IRBM LAUNCH AREA #2 (
48-49-30N 29-29-35E

Items accentuated in black
were first observed on this
mission.

Approximate scale:
1" equals 500'
(1:6000)

25X1D

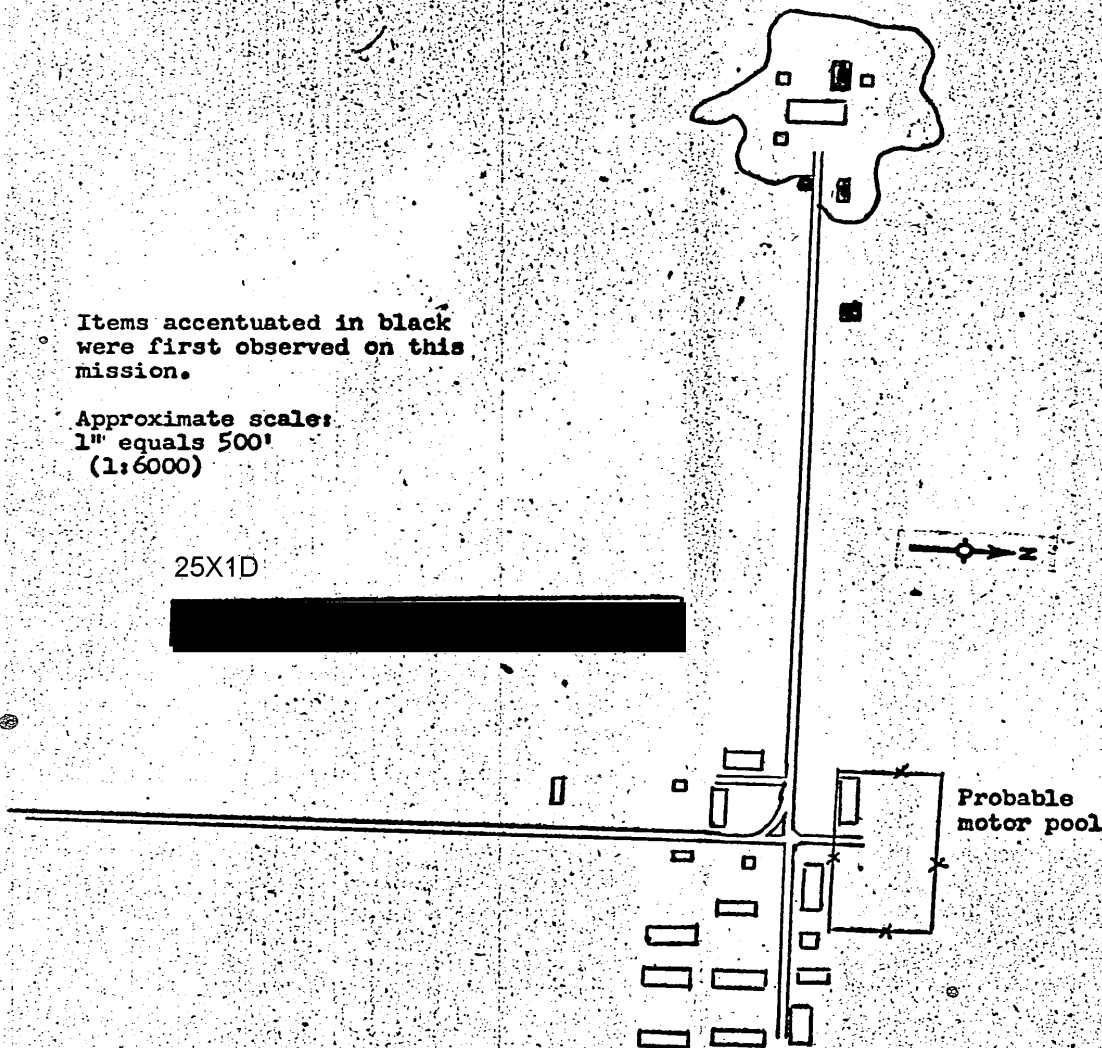


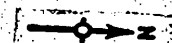
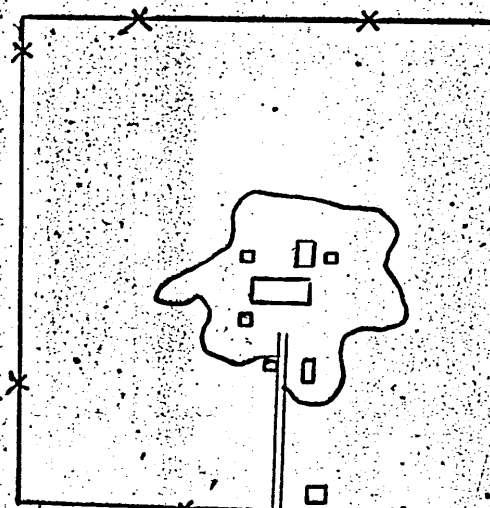
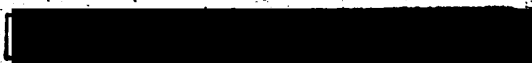
Figure III-d

TOP SECRET RUF
GRANOV IREB LAUNCH AREA #2 (
48-49-30N 29-29-15E

Items accentuated in black
were first observed on this
mission.

Approximate scale:
1" equals 500'
(1:6000)

25X1D



Probable
motor pool

Figure III-e

TOP SECRET RUF

TOP SECRET RUFF

GRANOV IRBM LAUNCH AREA #2
48-49-30N 29-29-15E

Items accentuated in black
were first observed on this
mission.

Approximate scale:
1" equals 500'
(1:6000)

25X1D

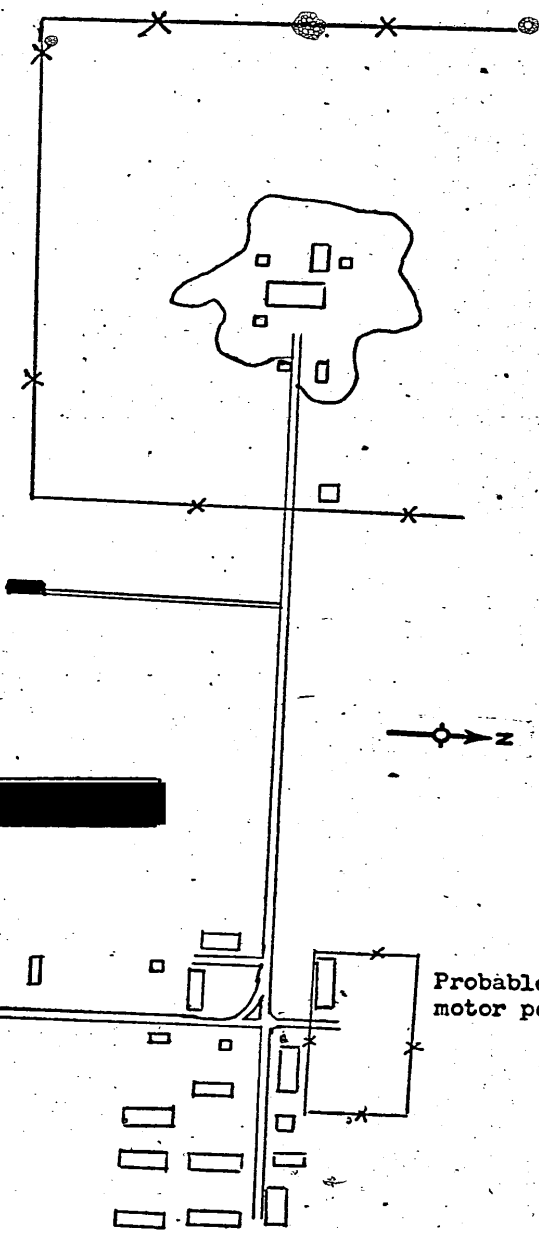


Figure III-f

TOP SECRET RUFF

CIA/PID/MEB-P-371/64

GRANOV IRBM LAUNCH AREA #3 (KALNIK)
48-59-30N 29-22-15E

PHOTO COVERAGE BY MISSION AND STATUS OF CONSTRUCTION

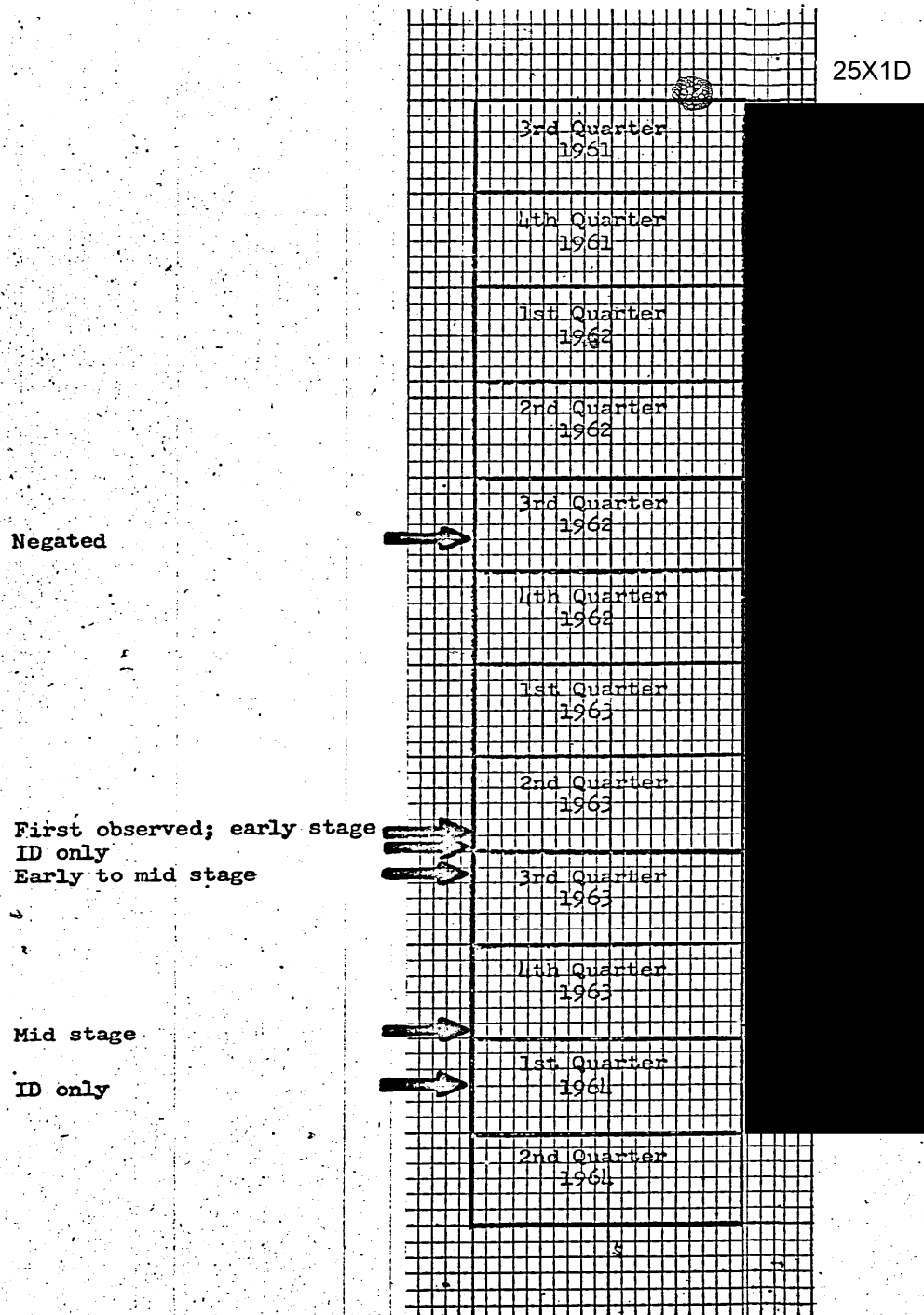


Figure IV-a

TOP SECRET RUFF

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GRANOV IREM LAUNCH AREA #3 (KALNIK)

48-59-30N 29-22-15E

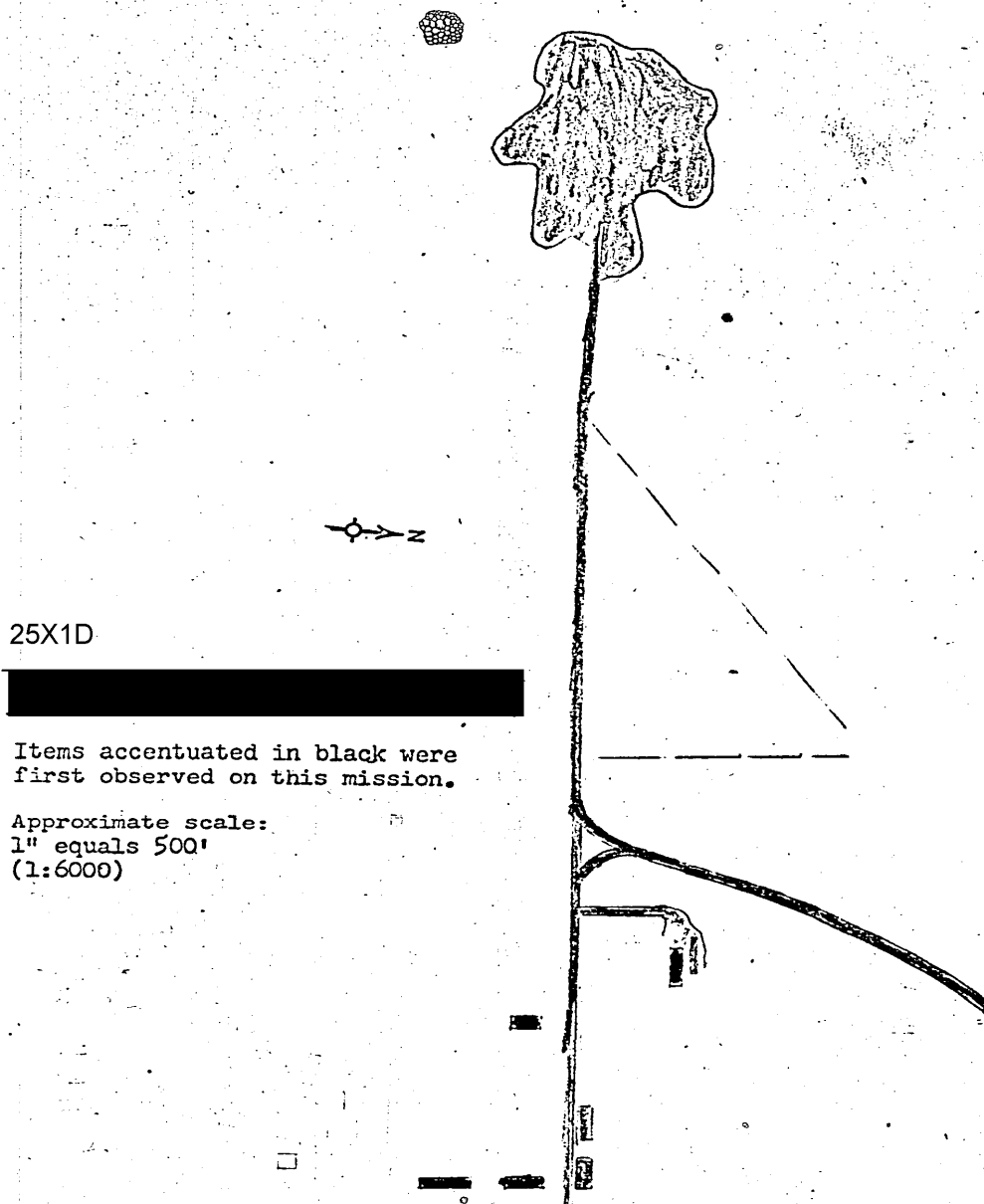


Figure IV-b

TOP SECRET RUFF

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CIA/PID/MEB-P-372/64

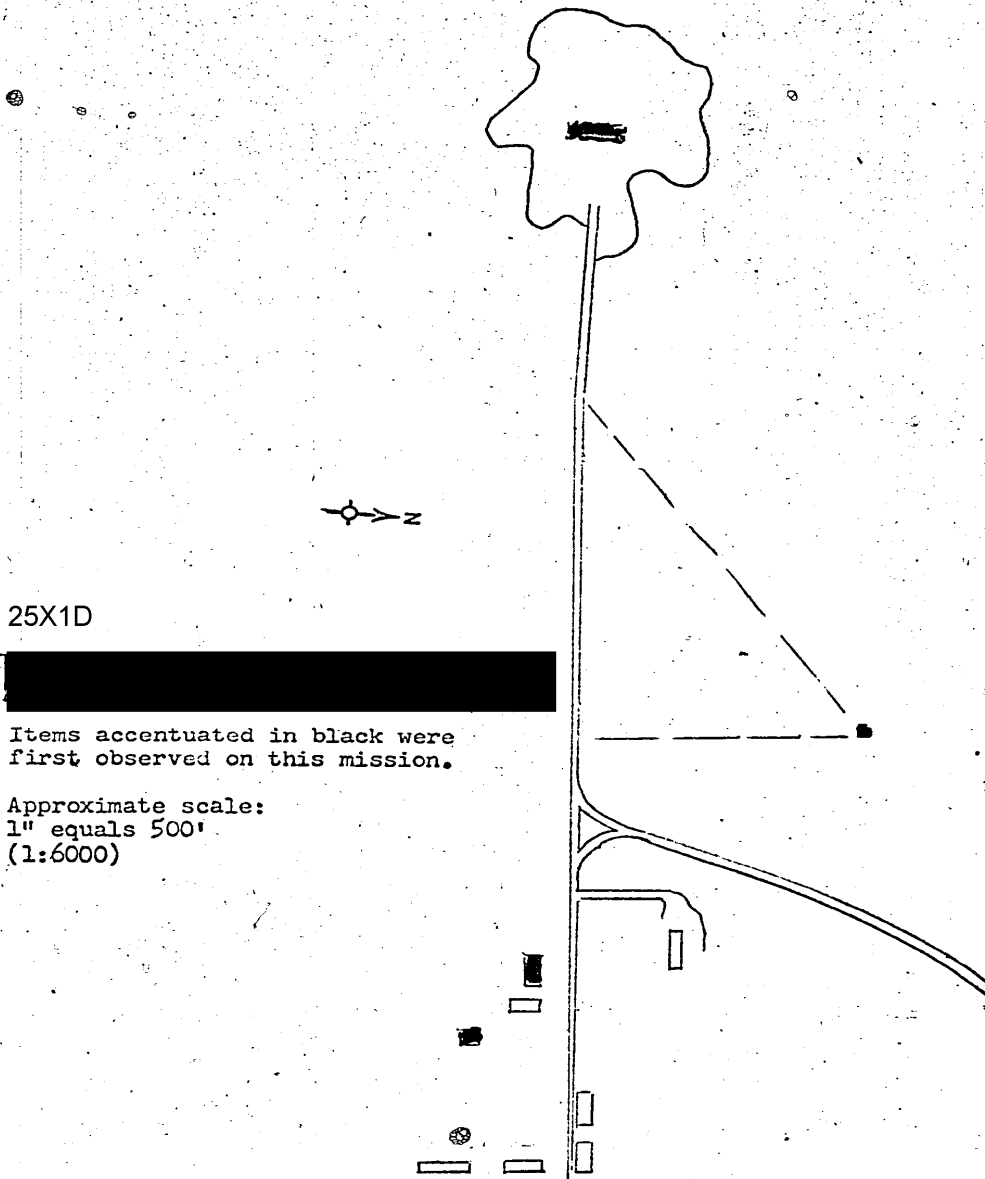


FIGURE IV-c

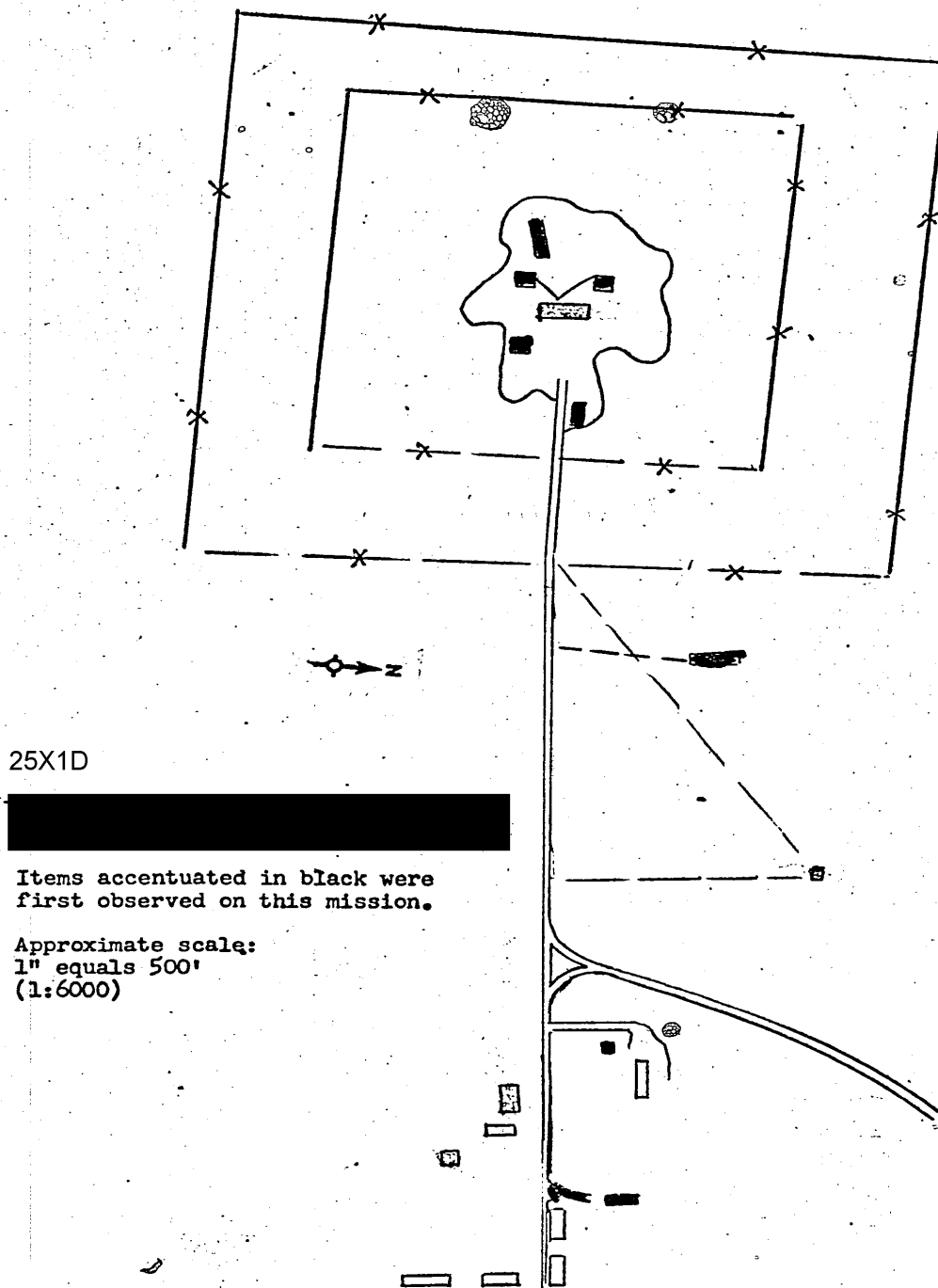


Figure IX-d

NIGRANDE IRBM LAUNCH AREA #3 (Vainode)
58-26-30N 21-50-15E

PHOTO COVERAGE BY MISSION AND STATUS OF CONSTRUCTION

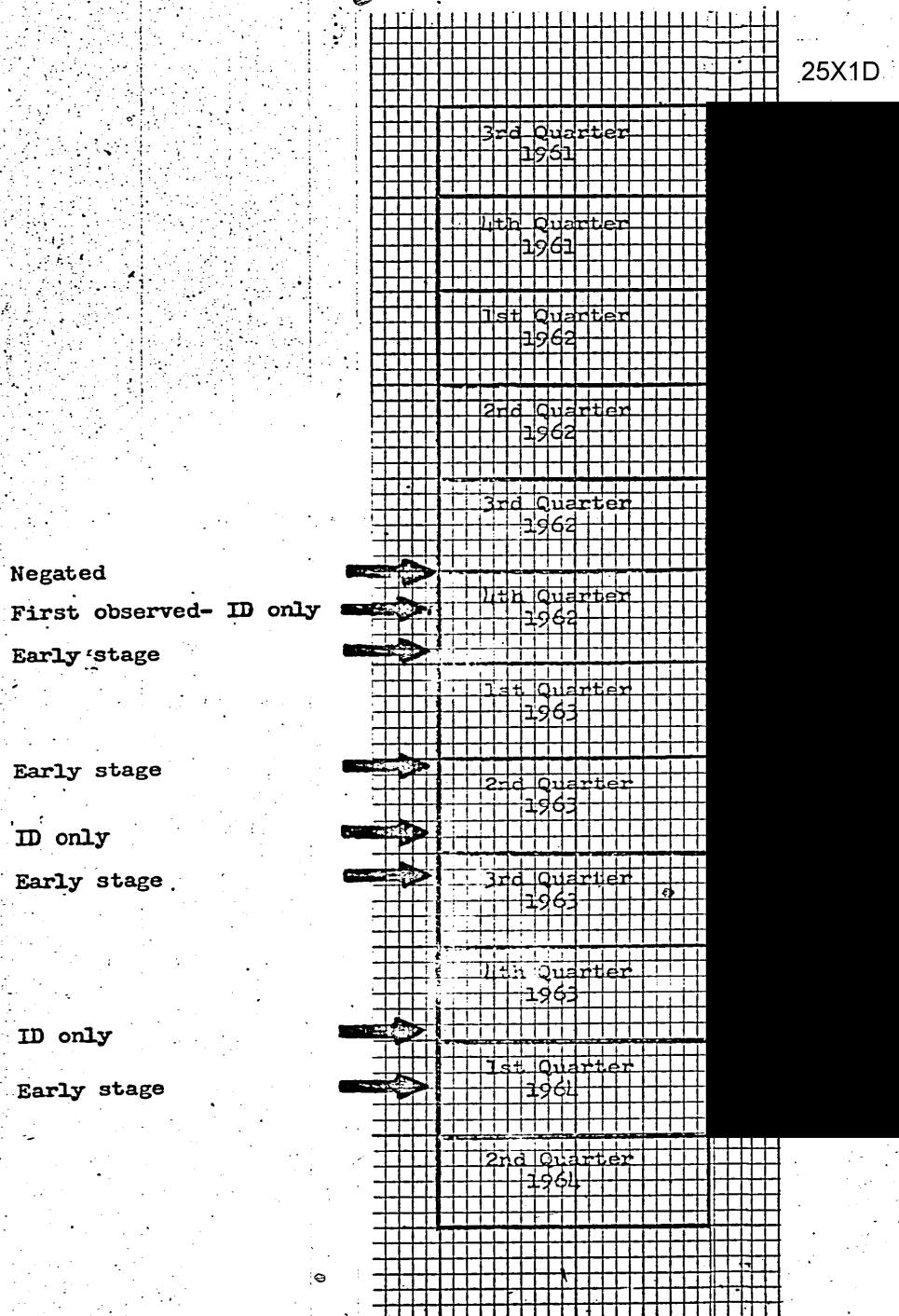


Figure V-2

NIGRANDE IREB LAUNCH AREA #3 (VAINODE)
58-26-30N 21-50-15E

25X1D

Items accentuated in black were
first observed on this mission.

Approximate scale:
1" equals 500'
(1:6000)

Vicinity ID only on this
mission due to heavy haze.

Abandoned fixed-field
site was present in

25X1D

Figure V-b

25X1D

Items accentuated in black were
first observed on this mission.

Approximate scale:
1" equals 500'
(1:6000)

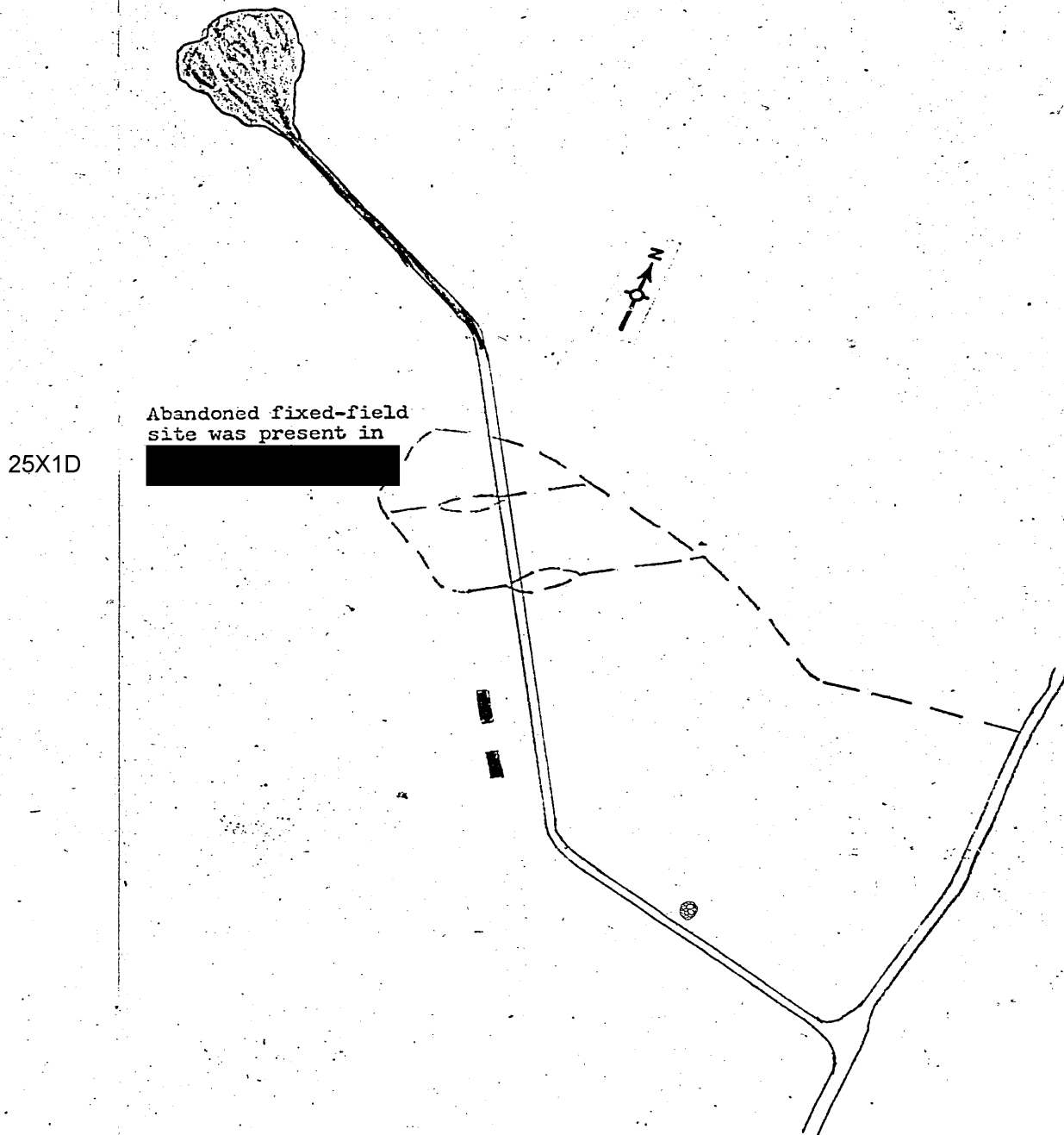


Figure V-c

25X1D

Items accentuated in black were
first observed on this mission.

Approximate scale:
1" equals 500'
(1:6000)

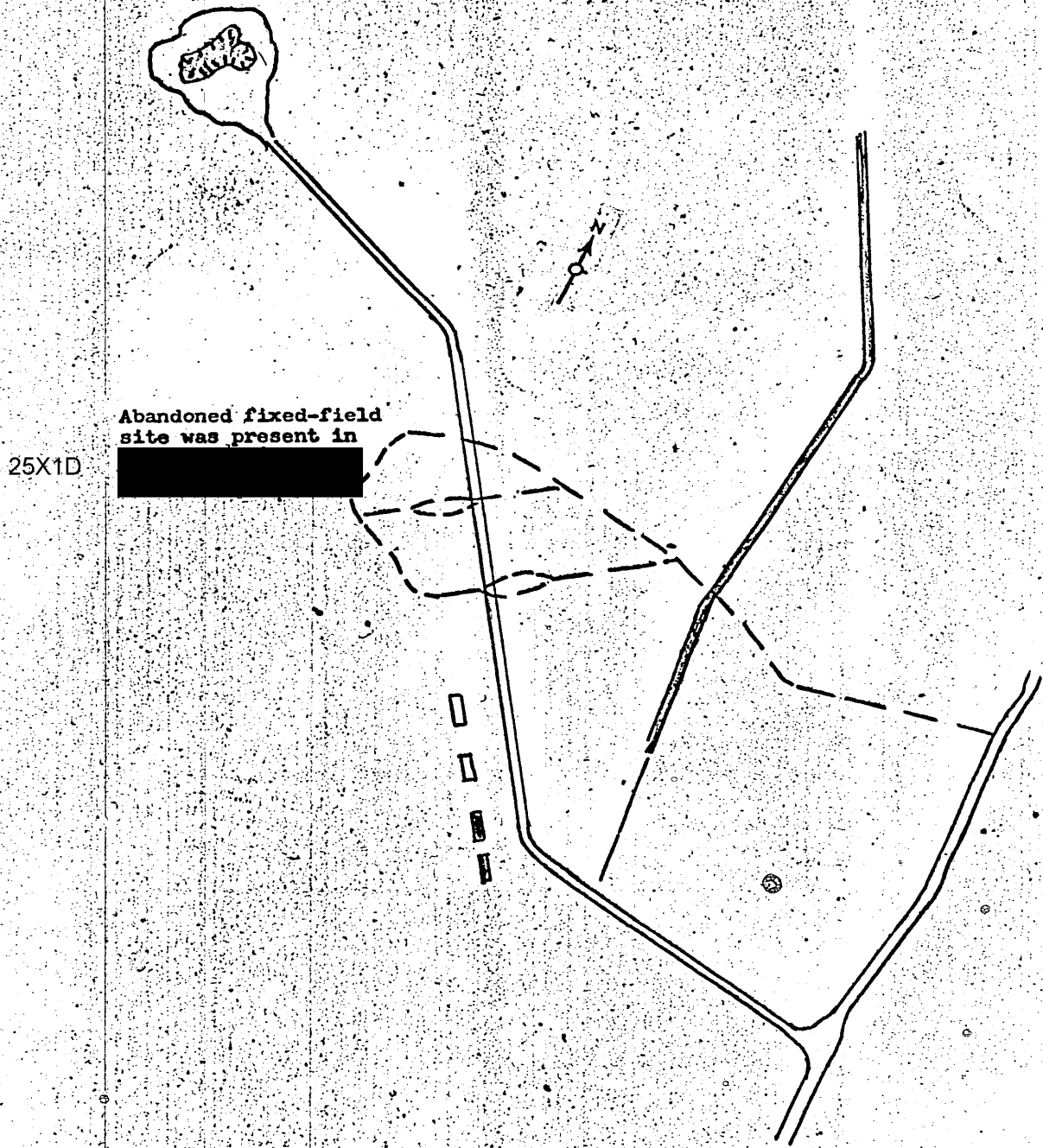


Figure V-d

TOP SECRET RUFF

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NIGRANDE IREM LAUNCH AREA #3 (VAINODE)

58-26-30N 21-50-15E

25X1D

Items accentuated in black were first observed on this mission.

Approximate scale:
1" equals 500'
(1:6000)

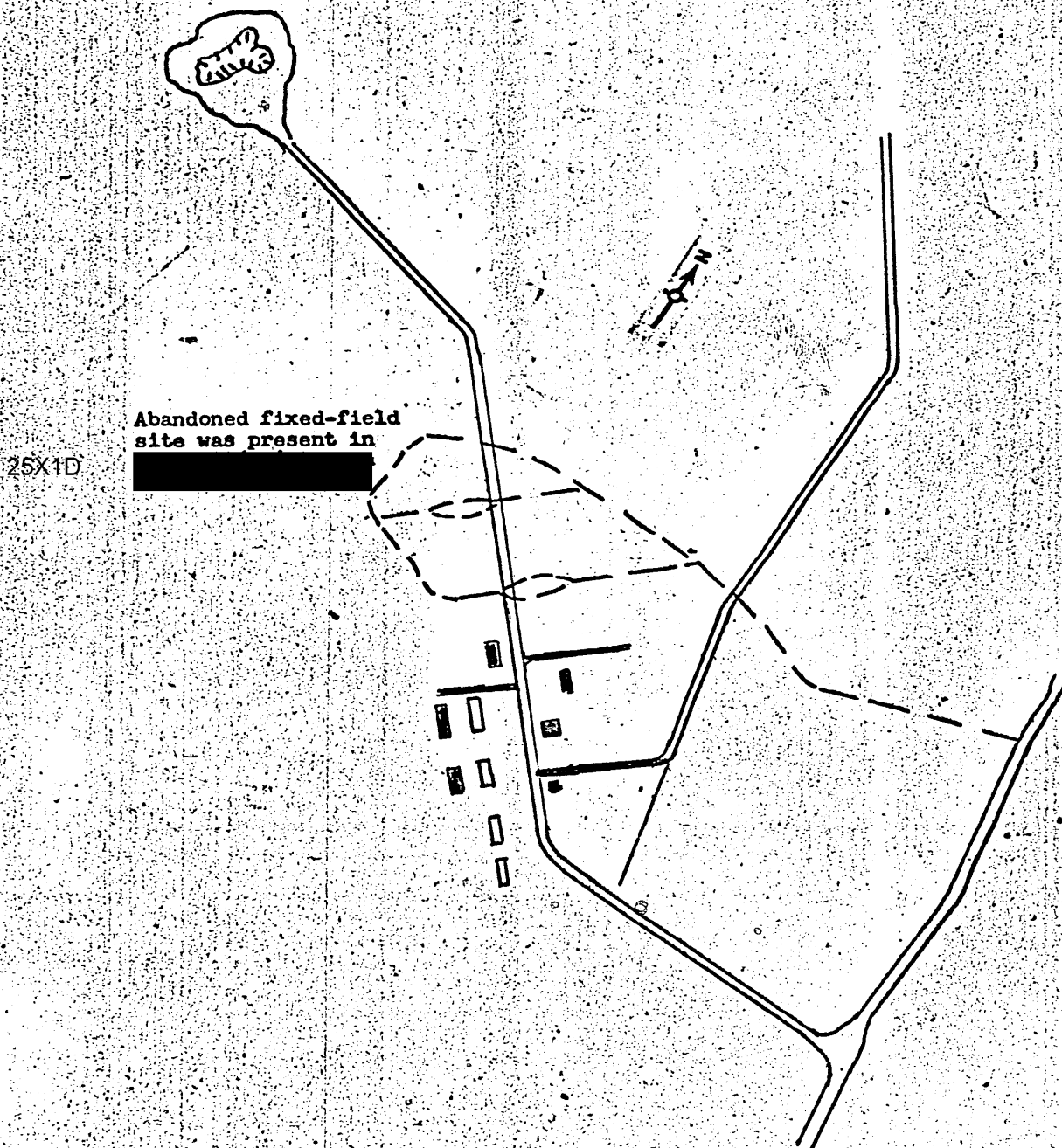


Figure V-e

TOP SECRET RUFF

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CIA/PID/MEB-P-373/64

TOP SECRET RUFF

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NIGRANDE IREM LAUNCH AREA #3 (VAINODE)

58-26-30N 21-50-15E

25X1D

Items accentuated in black were first observed on this mission.

Approximate scale:
1" equals 500'
(1:6000)

25X1D

Abandoned fixed-field site was present in

Figure V-f

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CIA/OD/NEO-P-373/64

TOP SECRET RUFF

NOVOSYVOYEVKA IRBM LAUNCH AREA #2
44-07-45N 133-27-30E

PHOTO COVERAGE BY MISSION AND STATUS OF CONSTRUCTION

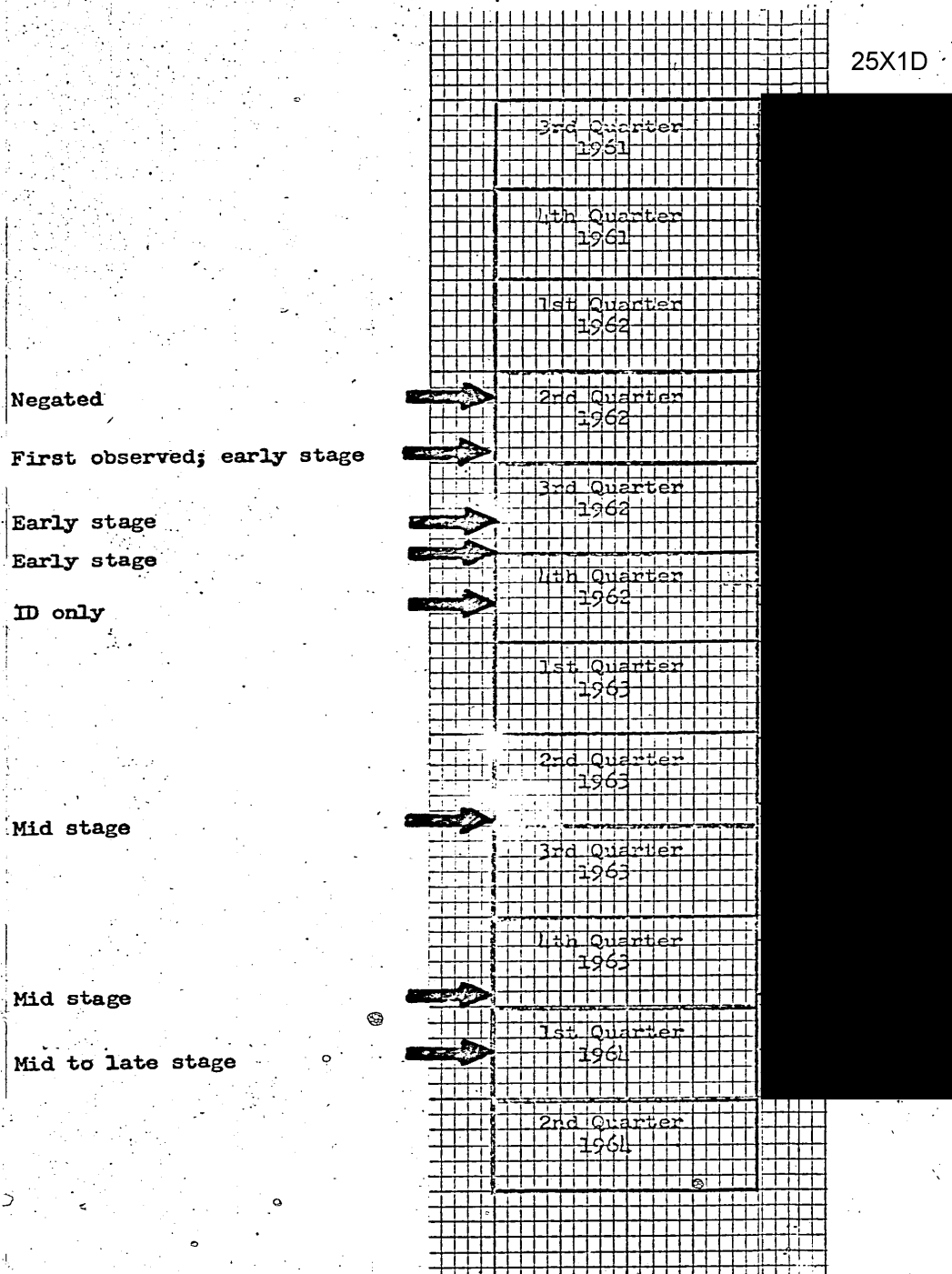


Figure VI-a

CIA/PID/NEB-F-374/64

TOP SECRET RUFF

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NOVOSYSOYEVKA IRBM LAUNCH AREA #2
44-07-45N 133-27-30E

25X1D



Items accentuated in black
were first observed on this
mission.

Approximate scale:
1" equals 500'
(1:6000)



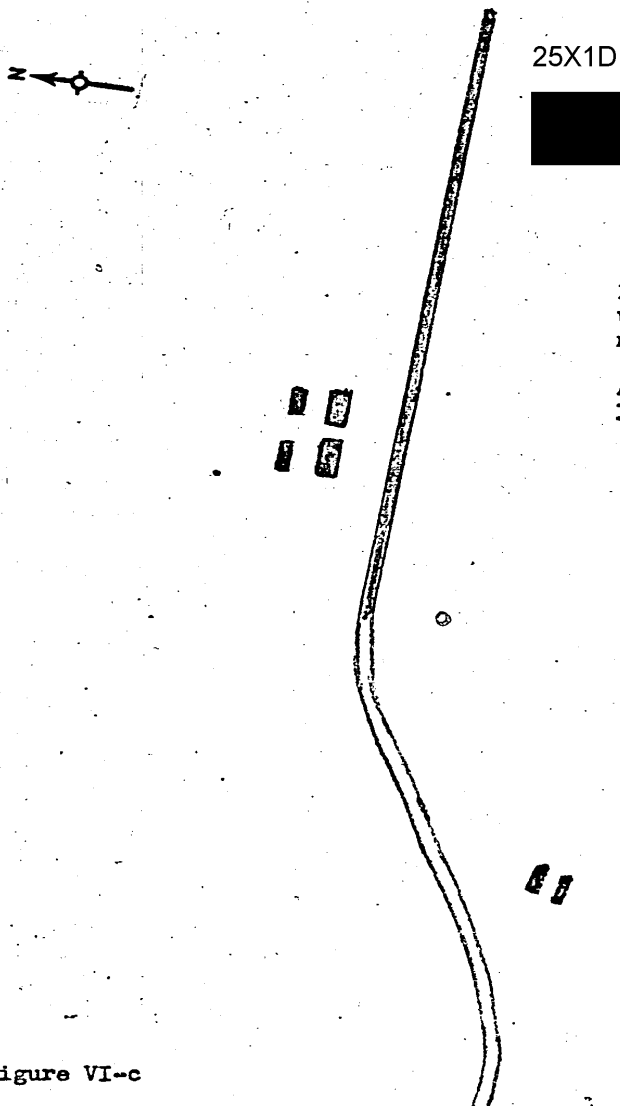


Figure VI-b

TOP SECRET RUFG

NOVOSYSOYEVKA IRBM LAUNCH AREA #2
44-07-45N 133-27-30E



25X1D

Items accentuated in black
were first observed on this
mission.

Approximate scale:
1" equals 500'
(1:6000)

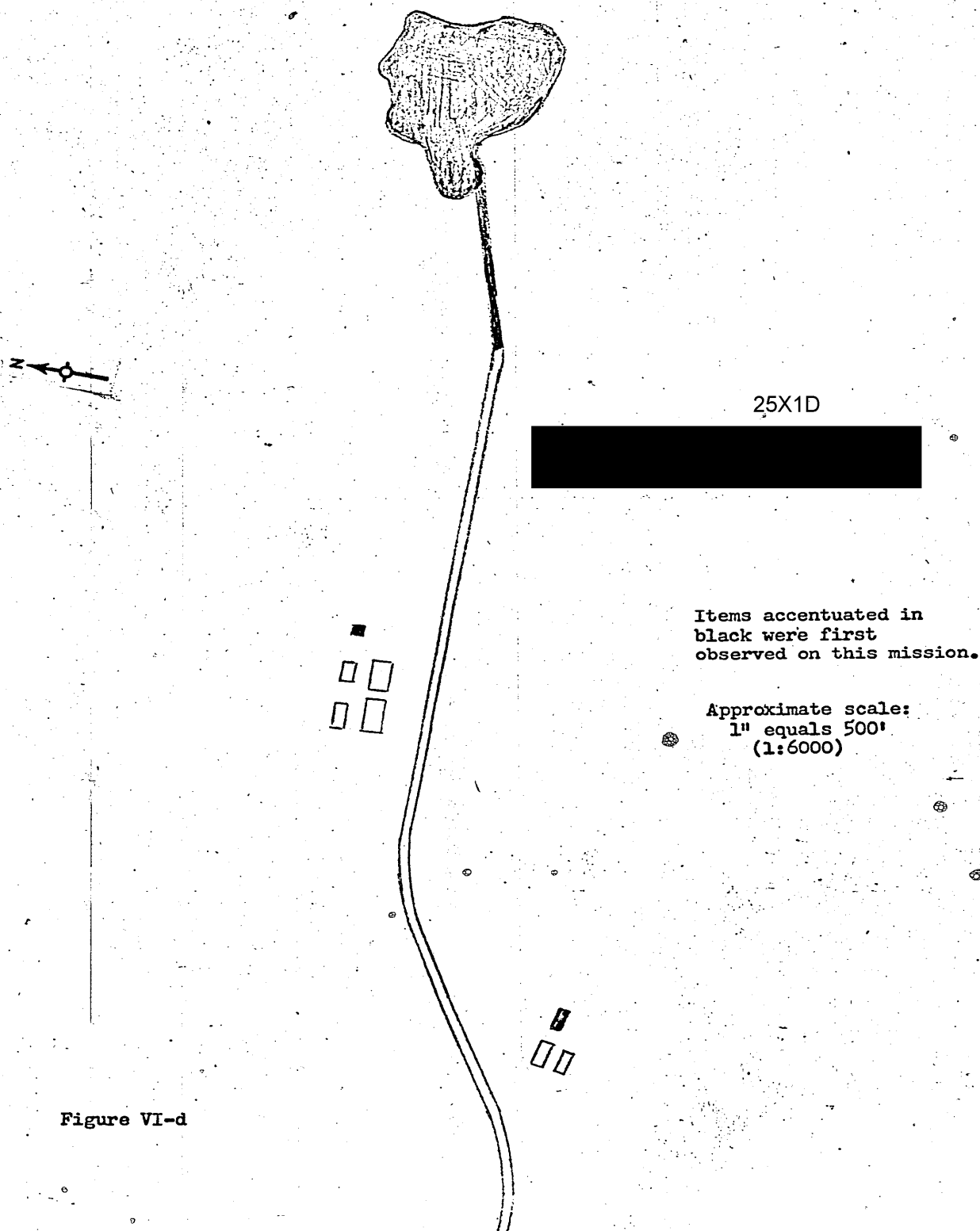
Figure VI-c

TOP SECRET RUFG

CIA/RDP/IRBM-PA 374/04

TOP SECRET RUFT

NOVOSYSOYEVKA ICBM LAUNCH AREA #2
44-07-45N 133-27-30E



TOP SECRET RUFT

NOVOSYSOYEVKA IRBM LAUNCH AREA #2
44-07-45N 133-27-30E

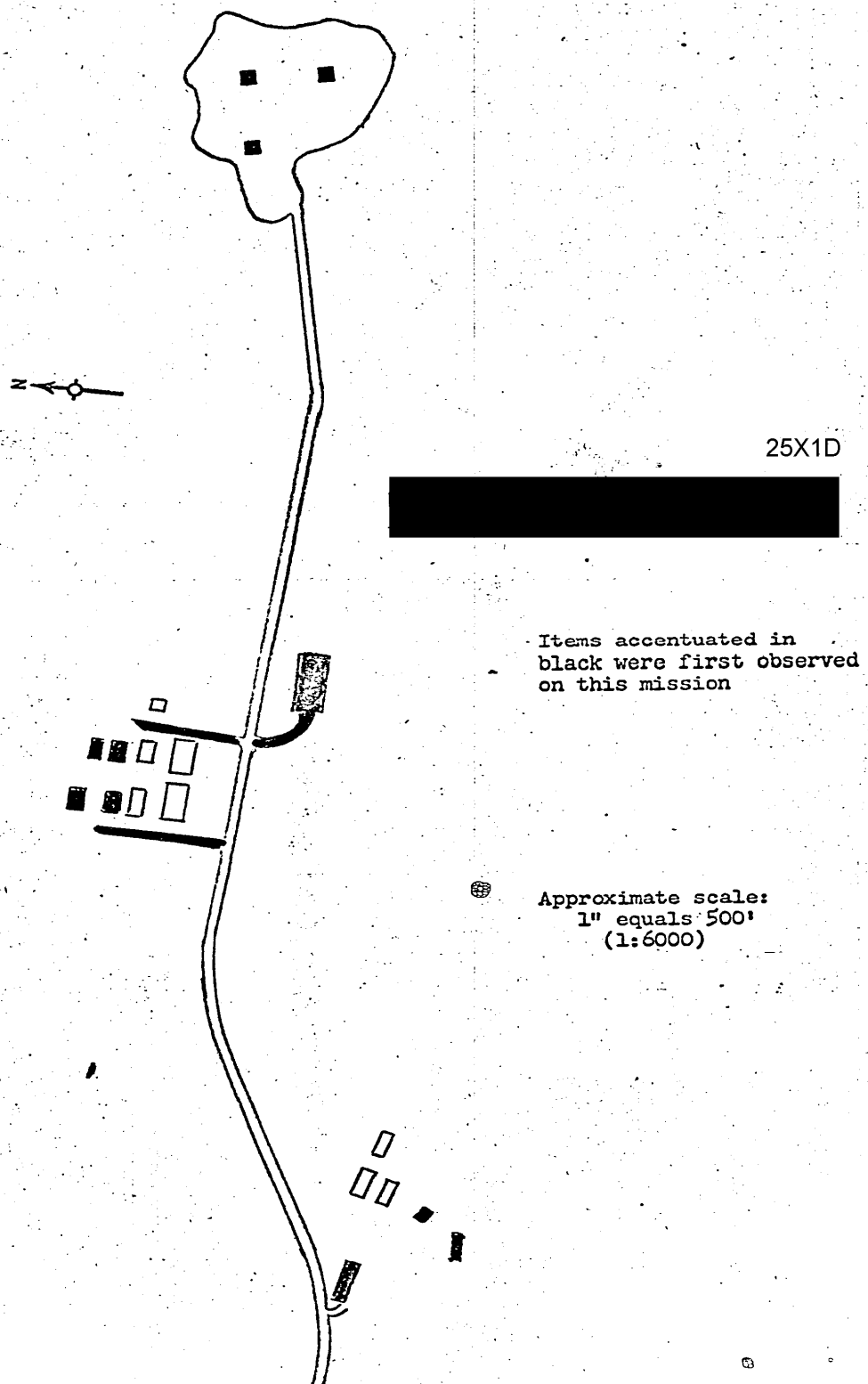


Figure VI-e

NOVOSYVOYEVKA IRBM LAUNCH AREA #2
44-07-45N 133-27-30E

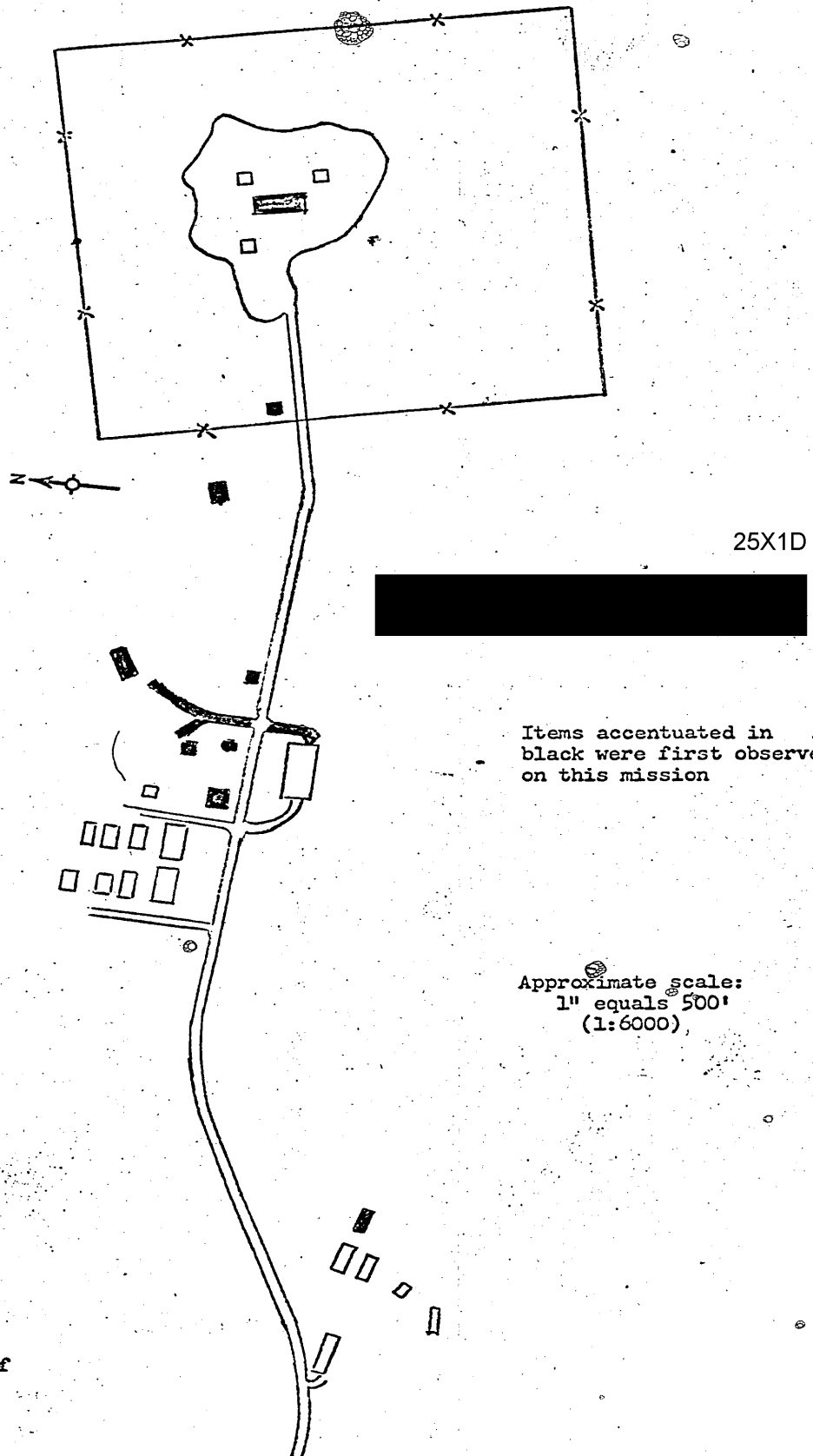
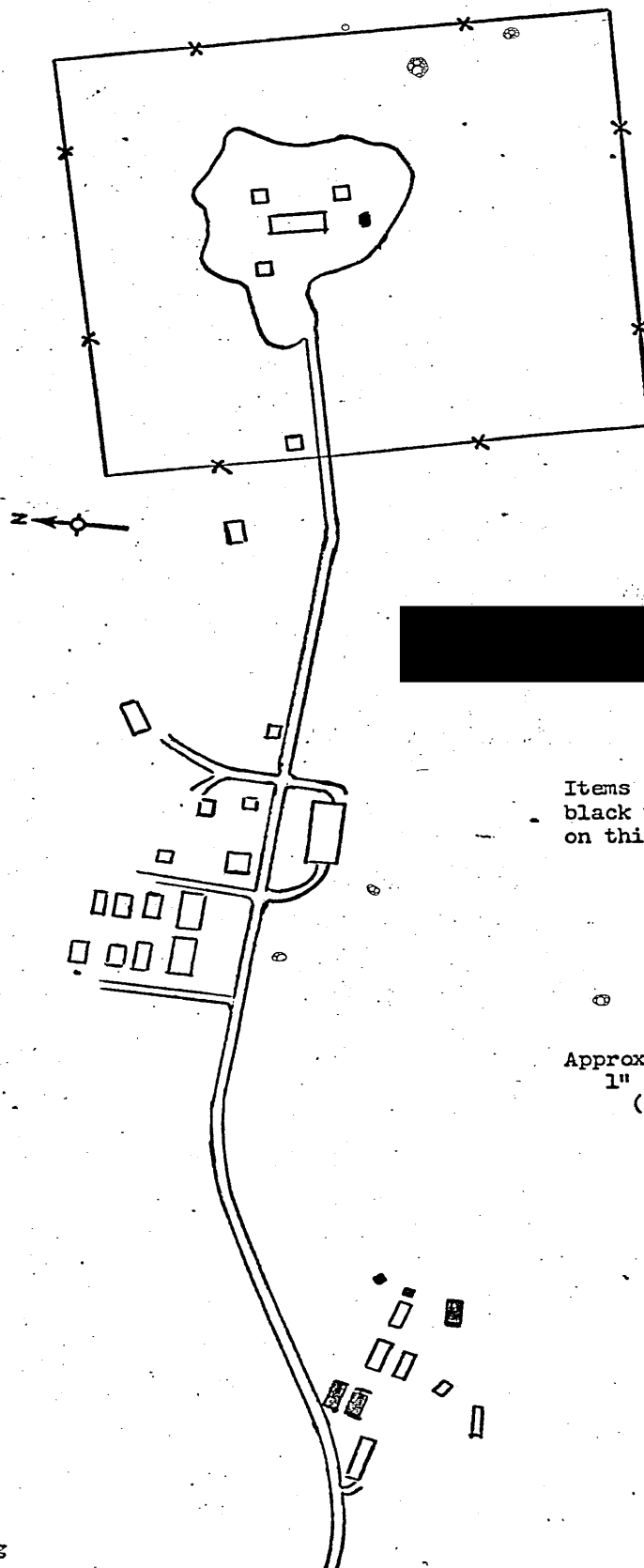


Figure VI-f

NOVOSYSOYEVKA IRBM LAUNCH AREA #2
44-07-45N 133-27-30E



25X1D

Items accentuated in
black were first observed
on this mission

Approximate scale:
1" equals 500'
(1:6000)

Figure VI-g

TOP SECRET RUFF

NOVOSYSOYEVKA IREM LAUNCH AREA #3
44-07-45N 133-24-30E

PHOTO COVERAGE BY MISSION AND STATUS OF CONSTRUCTION

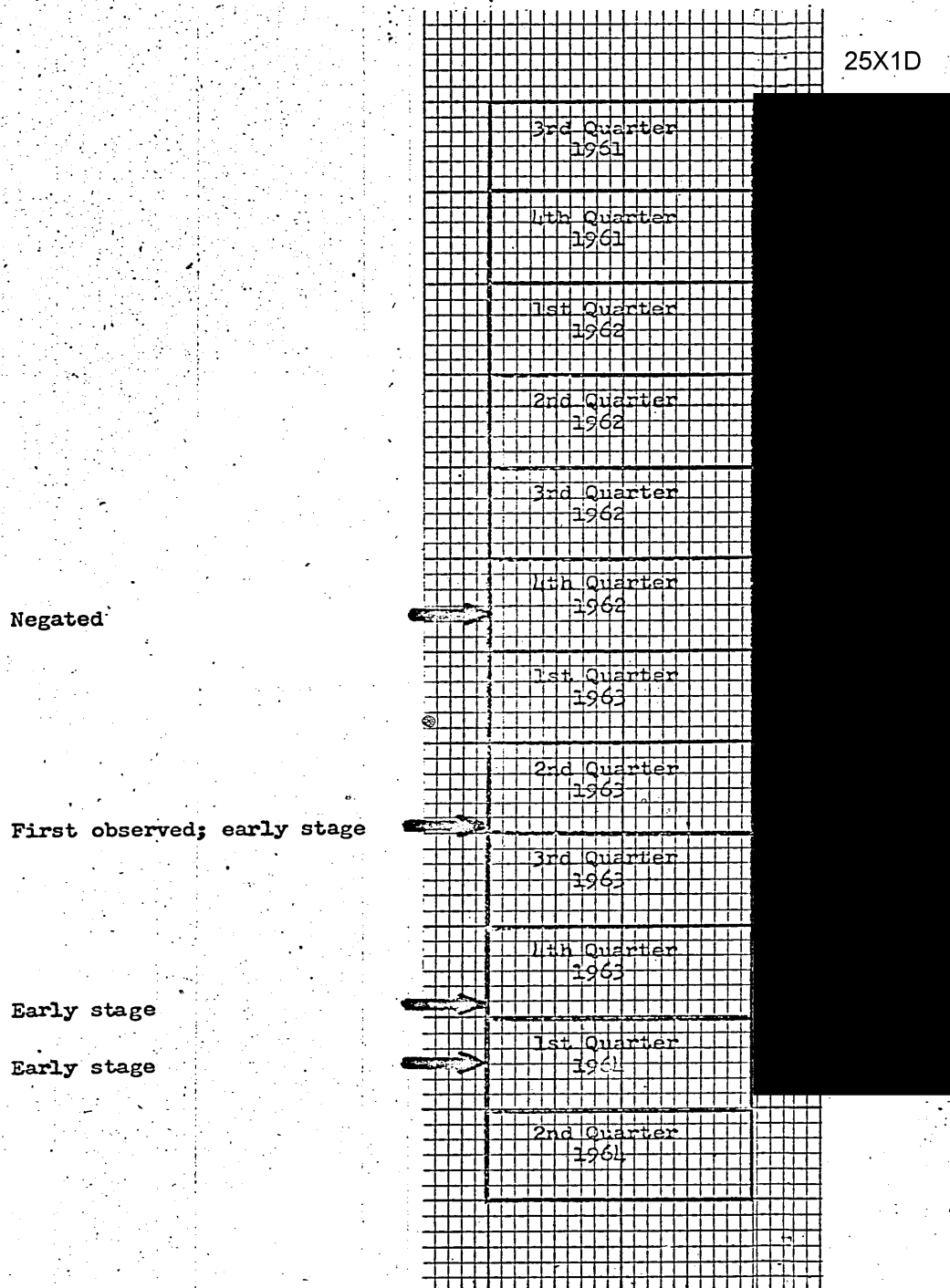


Figure VII-a

TOP SECRET RUFF

375/64

TOP SECRET RUFF
NOVOSYSOYEVKA ICBM LAUNCH AREA #3
44-07-45N 133-24-30E
site support

25X1D

Items accentuated in black
were first observed on this
mission.

Approximate scale:
1" equals 500'
(1:6000)

Figure VII-b

TOP SECRET RUFF

NOVOSYSOYEVKA ICBM LAUNCH AREA #3
44-07-45N 133-24-30E
site support

25X1D

Area obscured by broken to heavy clouds on this mission.

Items accentuated in black were first observed on this mission.

Approximate scale:
1" equals 500'
(1:6000)

To launch site.

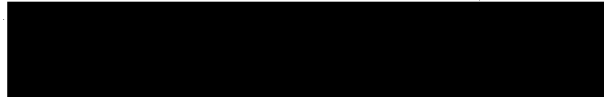
Figure VII-c

TOP SECRET RUFF

CIA/PID/MEB-P-375/64

NOVOSYSOYEVKA[®] IRBM LAUNCH AREA #3
44-07-45N 133-24-30E
site support

25X1D



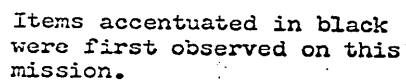
Items accentuated in black
were first observed on this
mission.

Approximate scale:
1" equals 500'
(1:6000)

To launch
site.

Figure VII-d

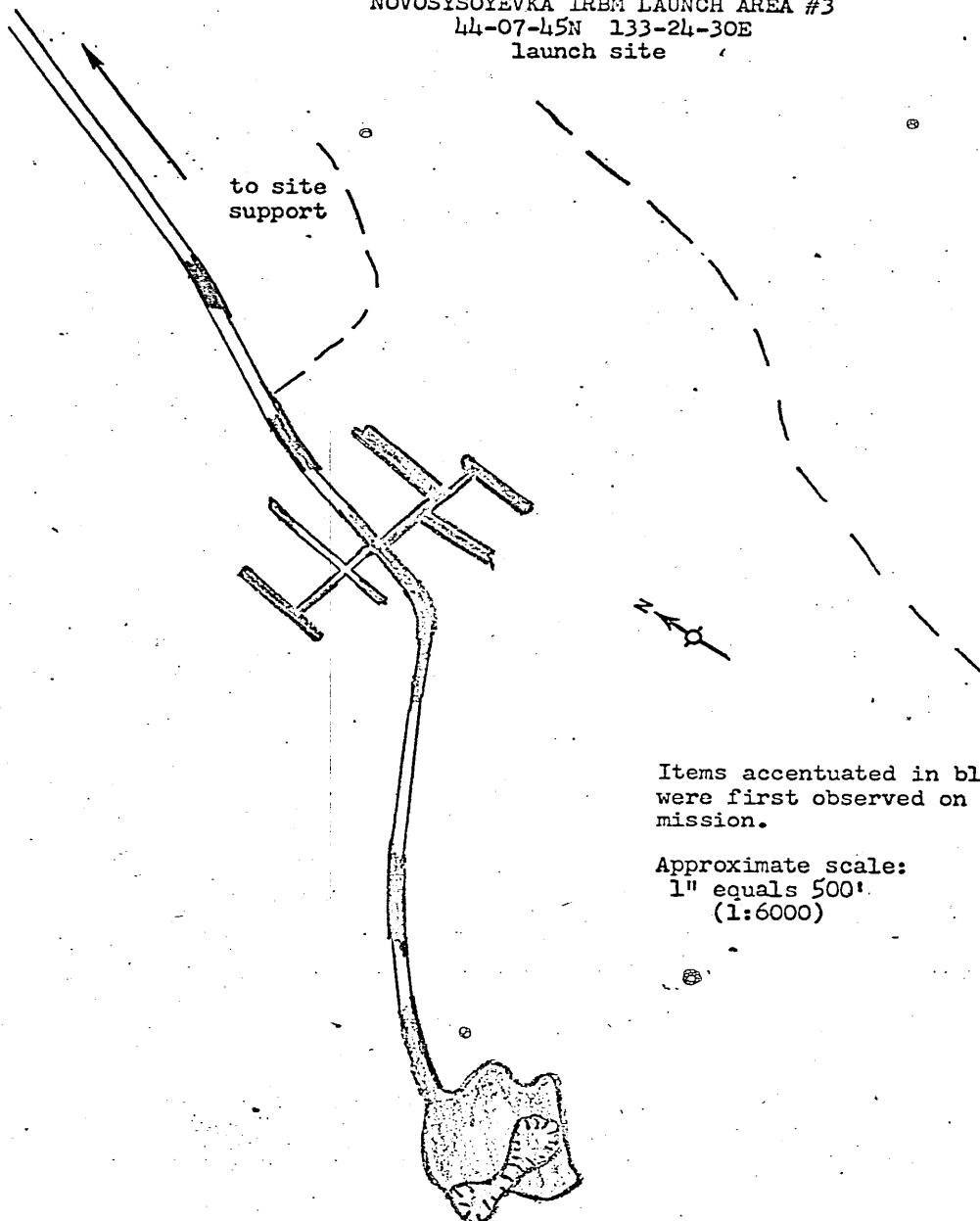
44-07-45N 133-24-30E
launch site



Area obscured by broken to heavy clouds on this mission.

TOP SECRET RUFF

TOP SECRET RUFF
NOVOSYSOYEVKA IRBM LAUNCH AREA #3
44-07-45N 133-24-30E
launch site



25X1D

Figure VII-f

TOP SECRET RUFF

OSTROV MRBM LAUNCH AREA #3 (REDKINO)
57-24-30N 28-26-45E

PHOTO COVERAGE BY MISSION AND STATUS OF CONSTRUCTION

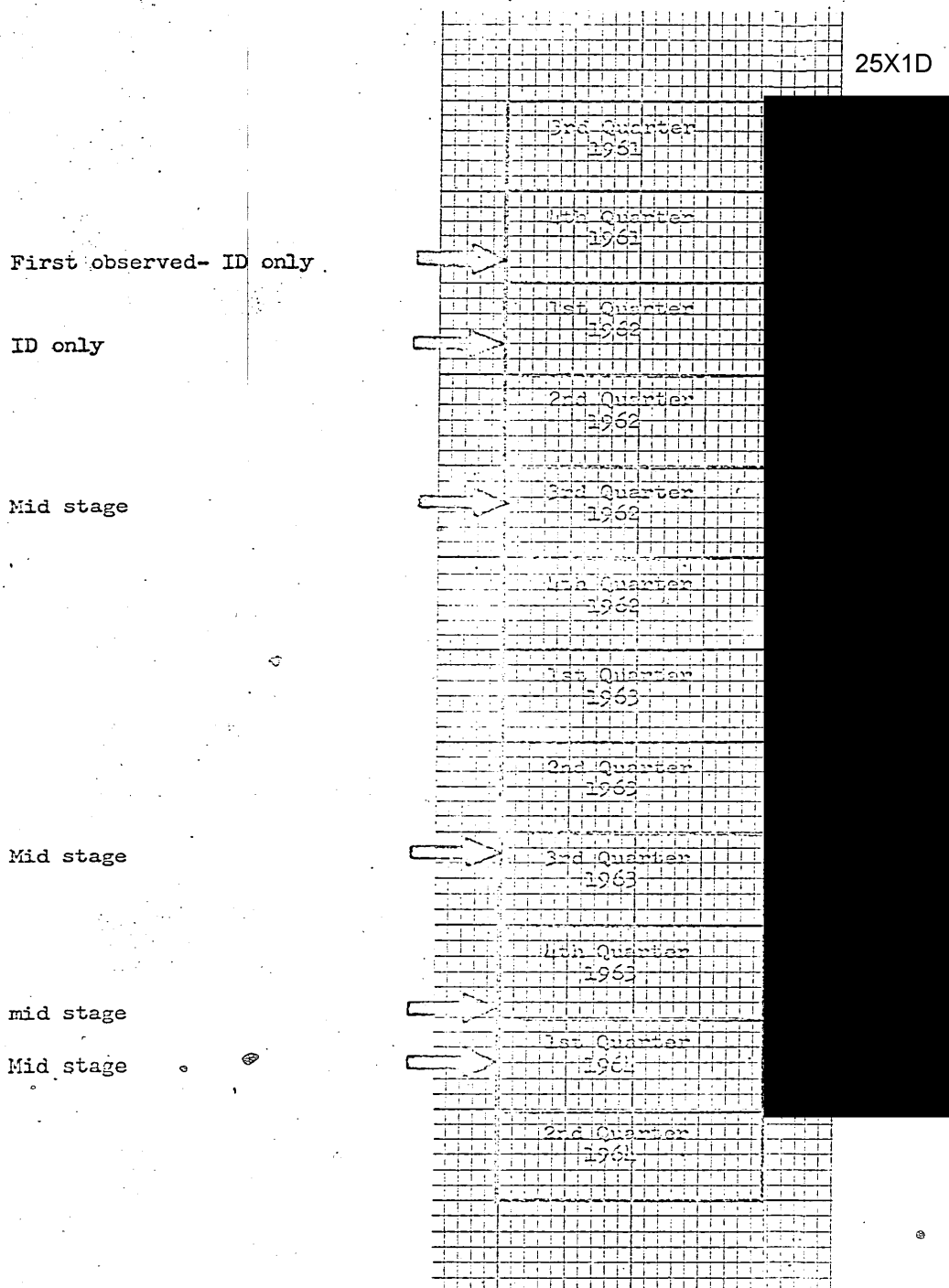


Figure XI-a

TOP SECRET RUFF

OSTROV MREX LAUNCH AREA #3 (REDKINO)
57-24-30N 2-26-45E

25X1D

Items accentuated in black were first observed on this mission.

Approximate scale:
1" equals 500'
(1:6000)

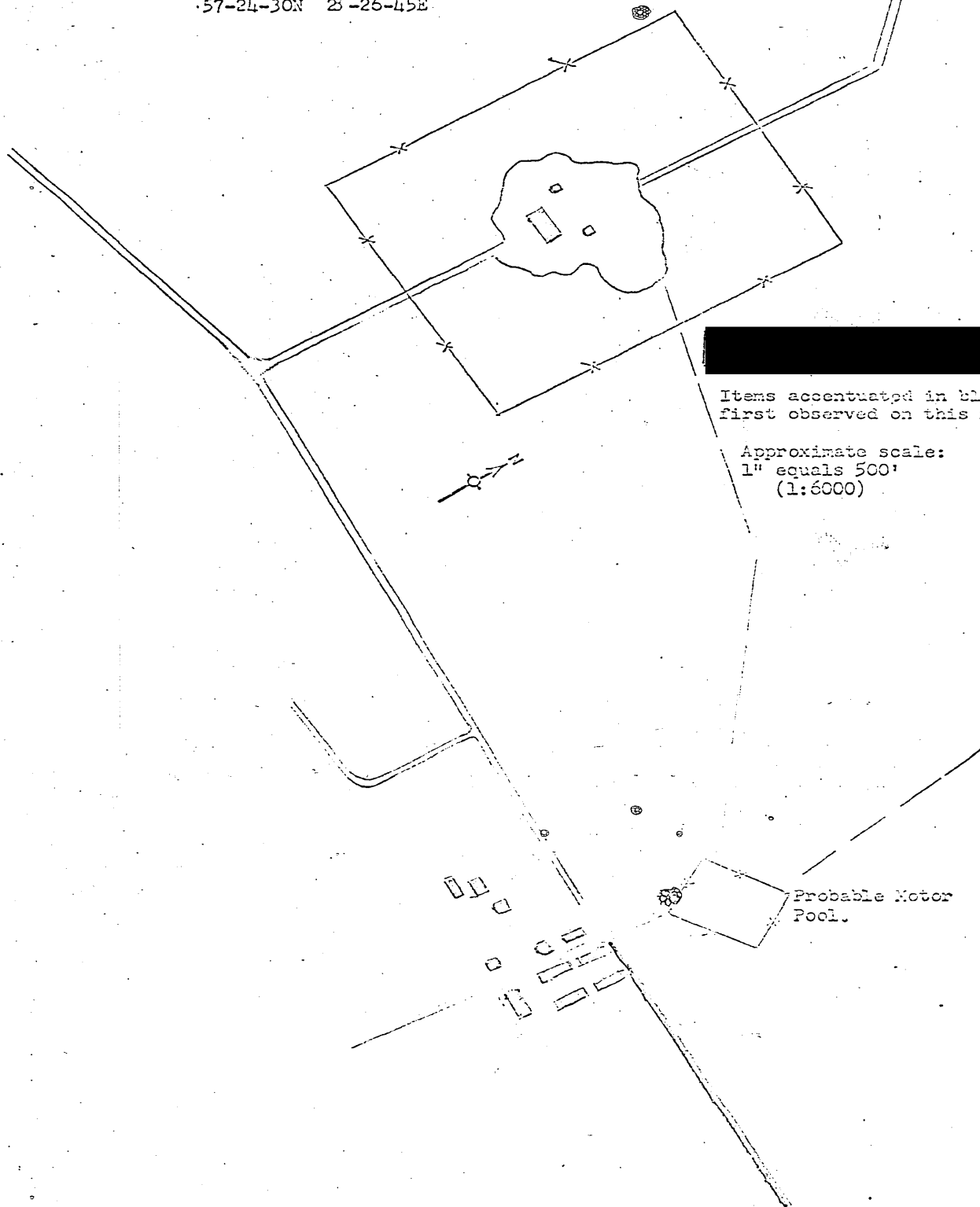
Entire area ID only on this mission due to haze and snow cover.

Figure XI-b

TOP SECRET RUFF

CLASSIFIED-P-379/44

OSTROV MREM LAUNCH AREA #3 (REDKENO)
57-24-30N 28-26-45E



25X1D

Items accentuated in black were first observed on this mission.

Approximate scale:
1" equals 500'
(1:6000)

Figure XI-c

OSTROV MREM LAUNCH AREA #3 (REDKINO)
57-24-30N 28-26-45E

25X1D

Items accentuated in black were
first observed on this mission.

Approximate scale:
1" equals 500'
(1:6000)

Probable Motor
Pool.

Figure XI-d

OSTROV MREM LAUNCH AREA #3 (REDKINO)
57-24-30N 26-45E

25X1D

Items accentuated in black were
first observed on this mission.

Approximate scale:
1" equals 500'
(1:6000)

Probable Motor
Pool.

Figure XI-a

OSTROV MREM LAUNCH AREA #3 (REDKINO)
57-24-30N 28-26-45E

25X1D

Items accentuated in black were
first observed on this mission.

Approximate scale:
1" equals 500'
(1:5000)

Probable Motor
Pool.

Figure XI-f

POSTAVY MREM LAUNCH AREA #3
55-06-15N 27-00-15E

PHOTO COVERAGE BY MISSION AND STATUS OF CONSTRUCTION

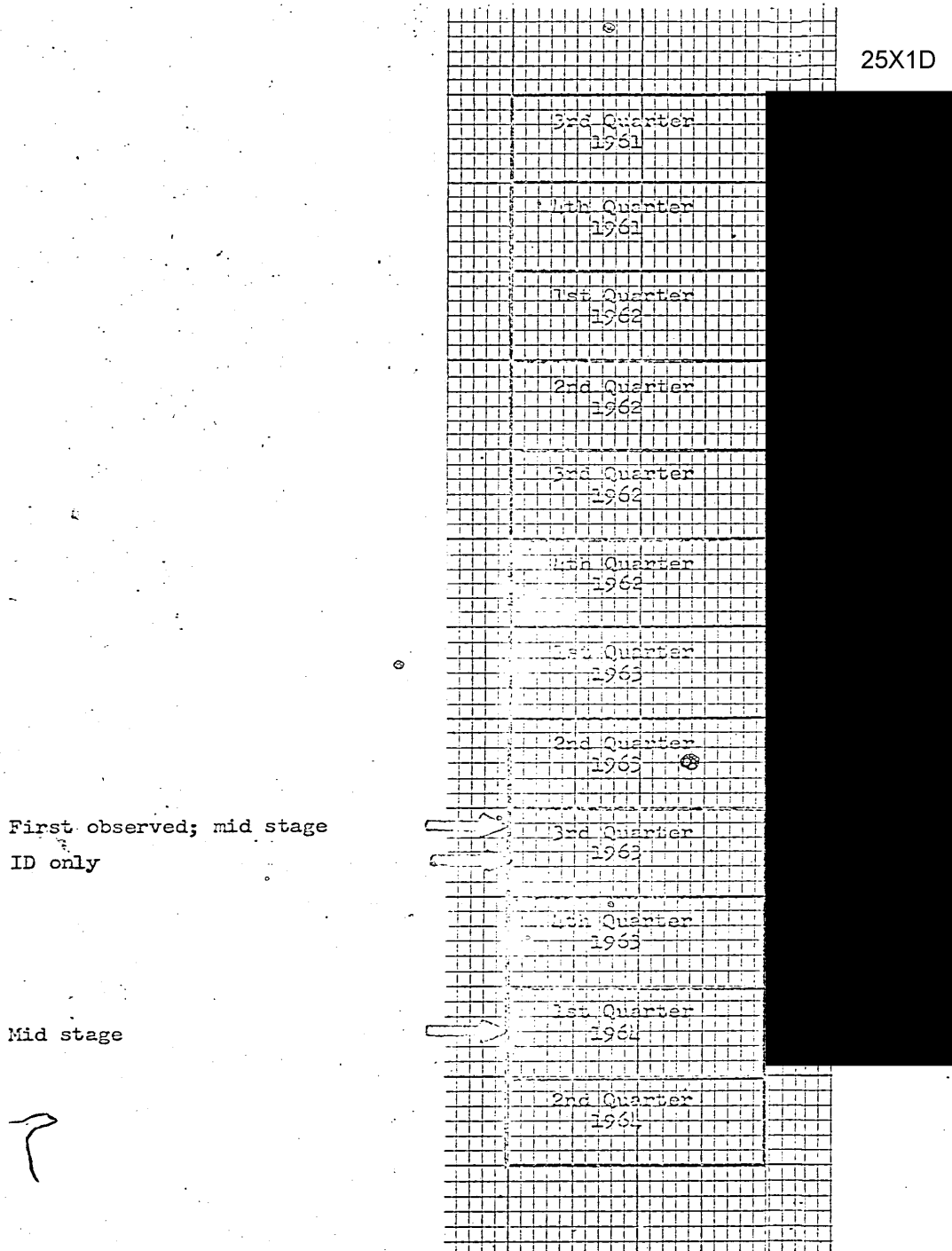


Figure XII-a

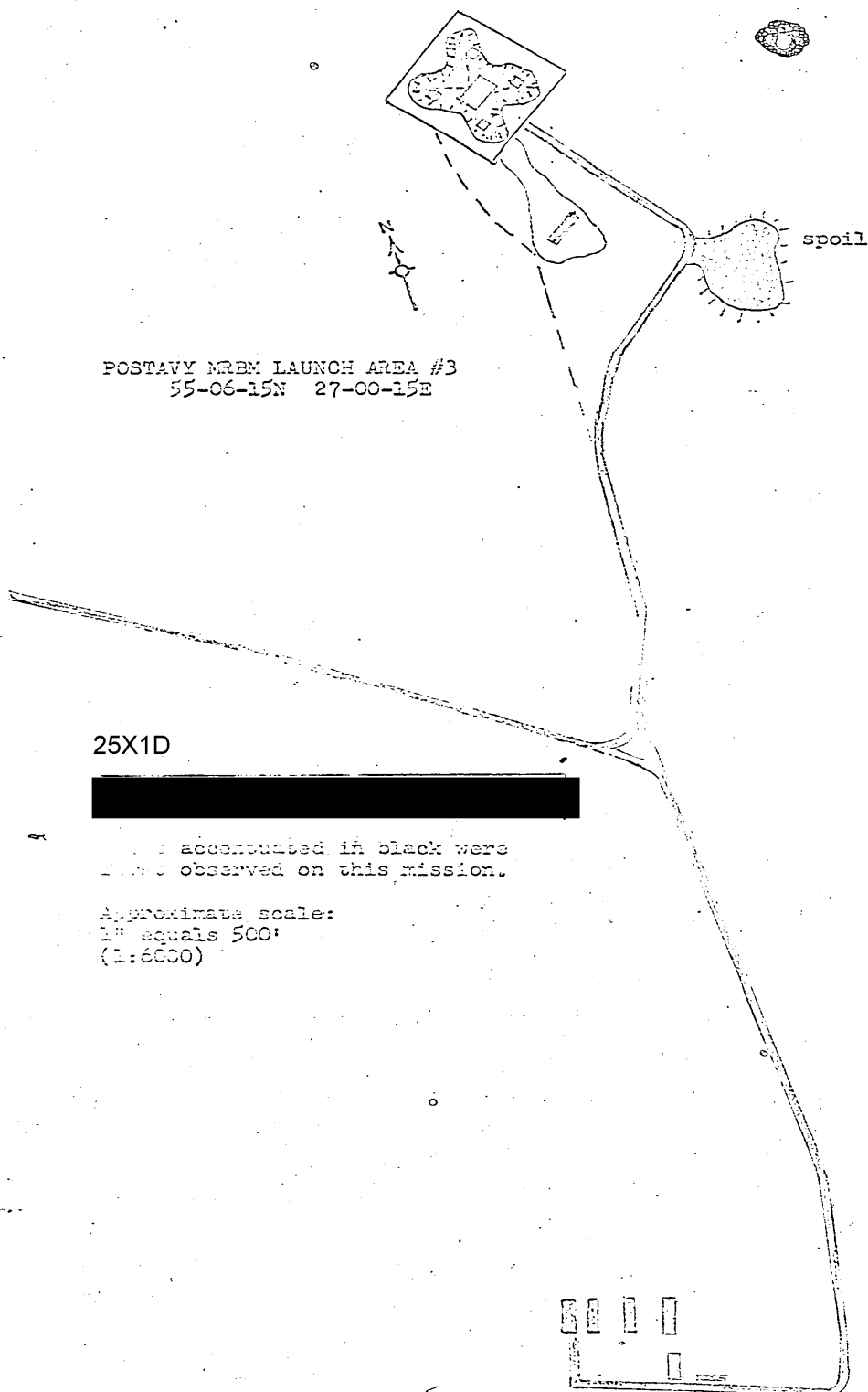


Figure XII-b

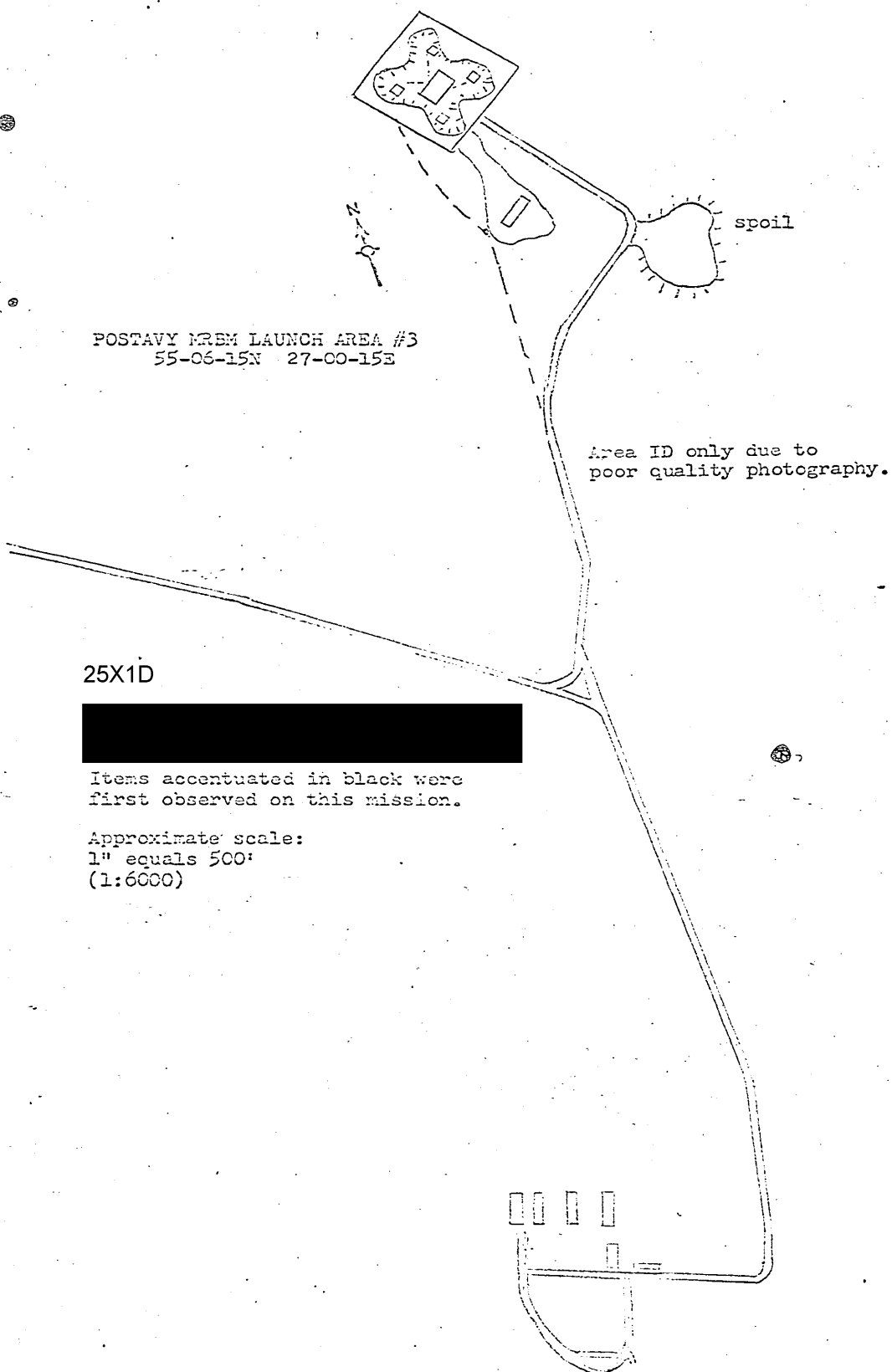
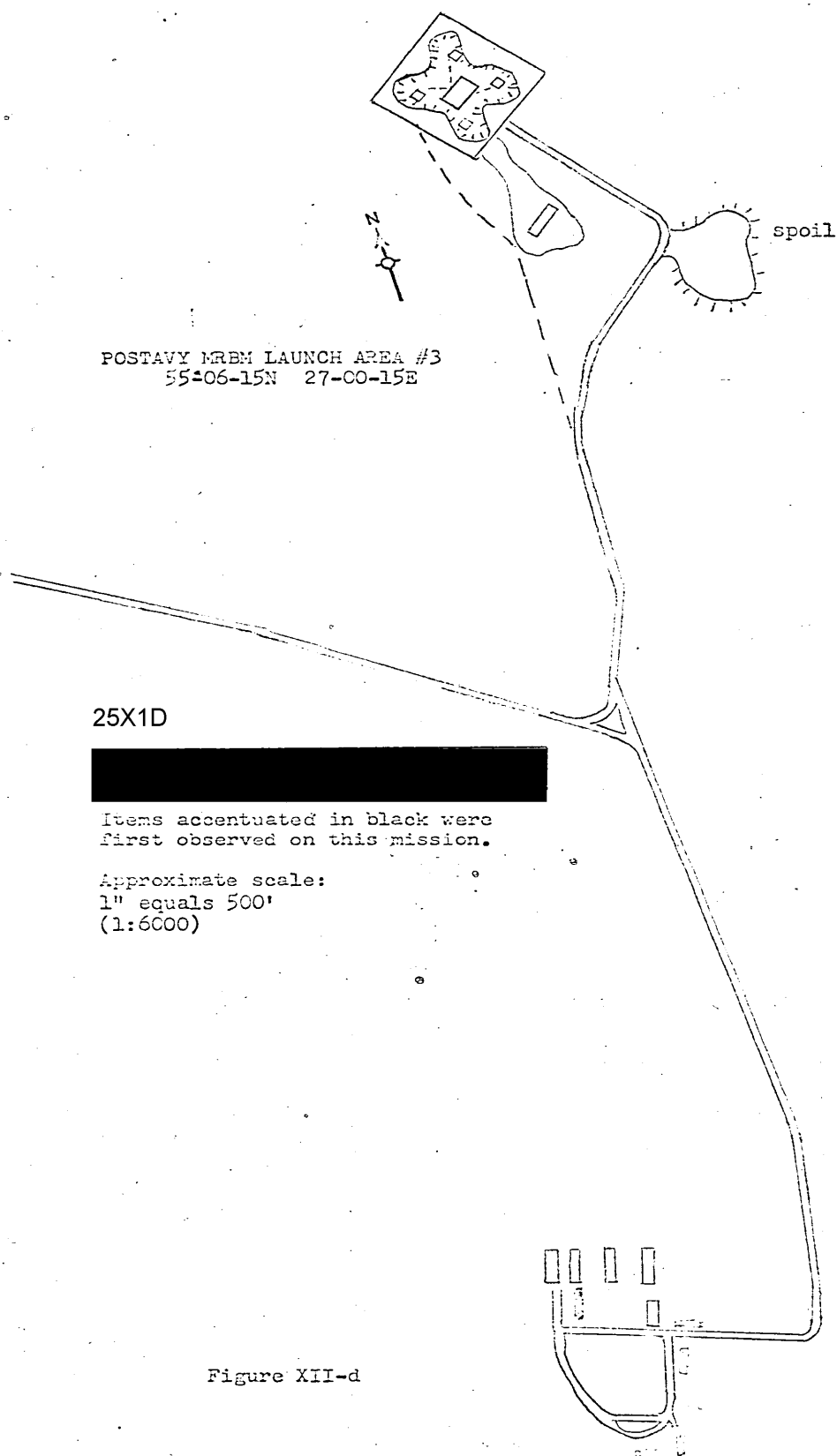


Figure XII-c



SARY OZEK IRBM LAUNCH AREA #3 (KARA BABAU #3)
44-31-00N 77-43-00E

PHOTO COVERAGE BY MISSION AND STATUS OF CONSTRUCTION

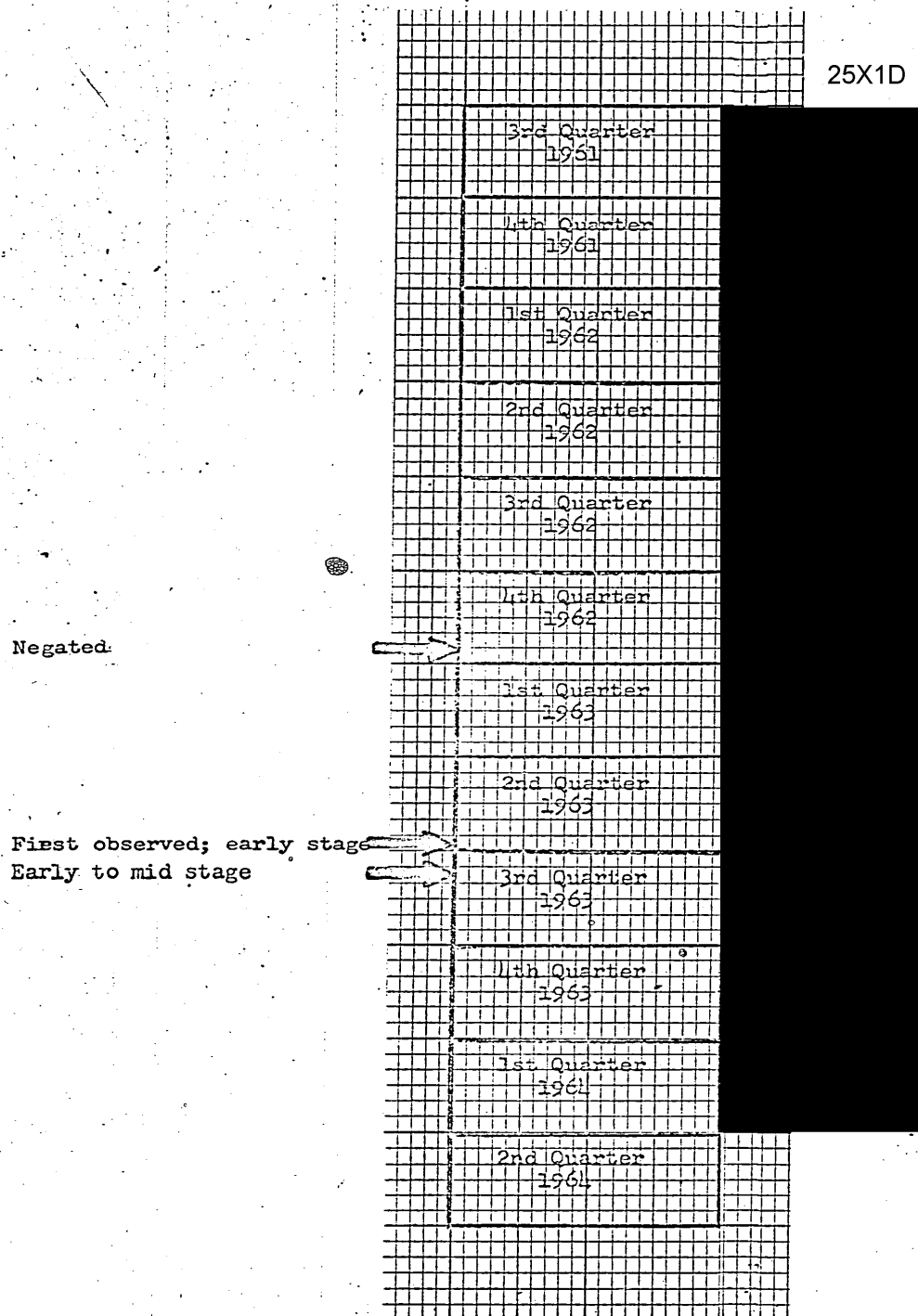


Figure VIII-a

TOP SECRET RUFF

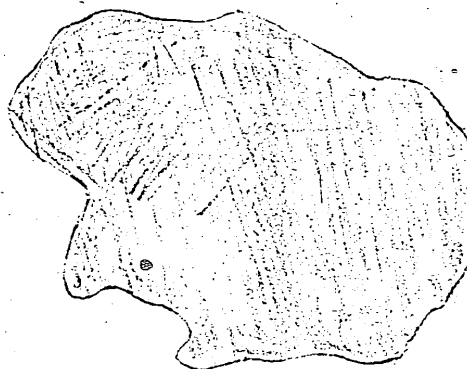
SARY OZEK IREM LAUNCH AREA #3
(KARA BABAU #3)
44-31-00N 77-43-00E
Launch Site

To site support
facility.

Items accentuated in
black were first observed
on this mission.

Approximate scale:
1" equals 500'
(1:6000)

Launch site partially obscured
by clouds on this mission.

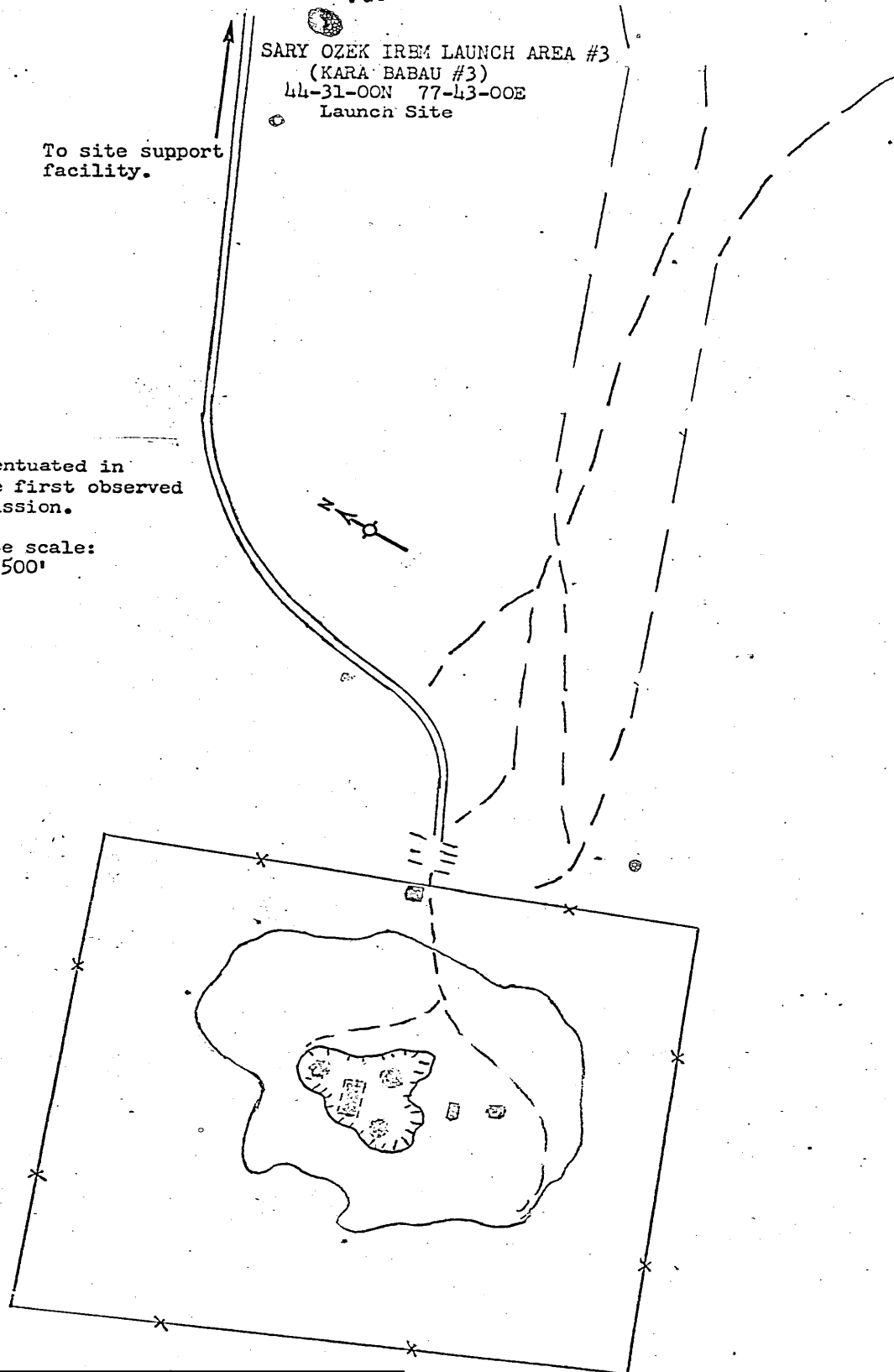


25X1D

Figure VIII*b

TOP SECRET RUFF

CIA/PID/MEB-P-376/64



25X1D

Figure VIII-c

TOP SECRET RUFF

SARY OZEK IREM LAUNCH AREA #3
(KARA BABAU #3)
44 31 00N 77-43-00E
Site Support Facility

25X1D

Items accentuated in black were first observed on this mission.

Approximate scale:
1" equals 500'
(1:6000)

site support facility
partially obscured by
clouds on this mission.

Probable
Motor Pool.

To Launch
Site.

FIGURE VIII-d

TOP SECRET RUFF

CIA/PID/WEB-P-376/64

SARY OZEK IRBM LAUNCH AREA #3
(KARA BABAU #3)
44 31 OON 77-43-OOE
Site Support Facility

25X1D

Items accentuated in black were first
observed on this mission.

Approximate scale:
1" equals 500'
(1:6000)

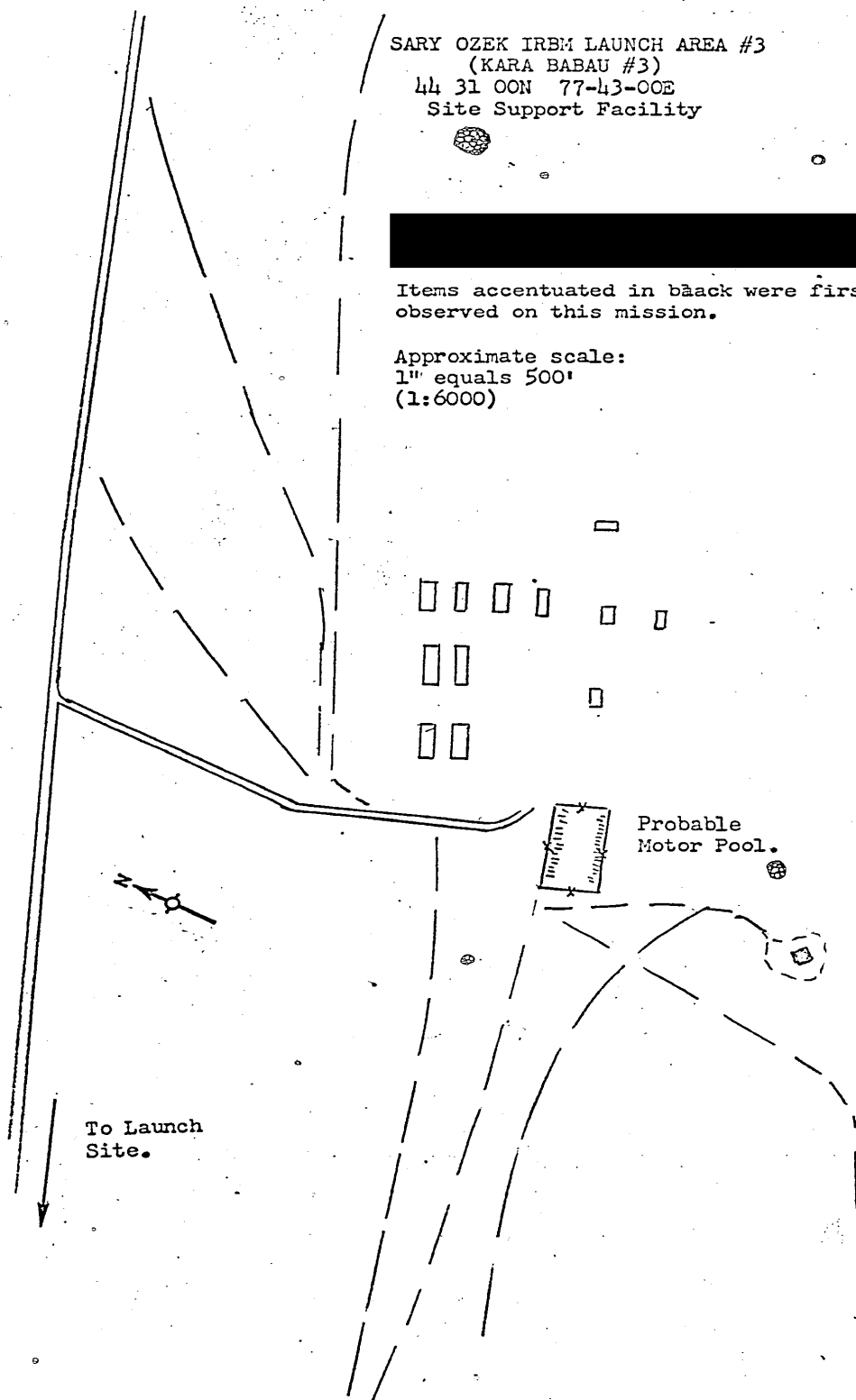


Figure VIII-e

TOP SECRET RUF

SMORGON IREB LAUNCH AREA #3
54-26-15N 26-18-15E

PHOTO COVERAGE BY MISSION AND STATUS OF CONSTRUCTION

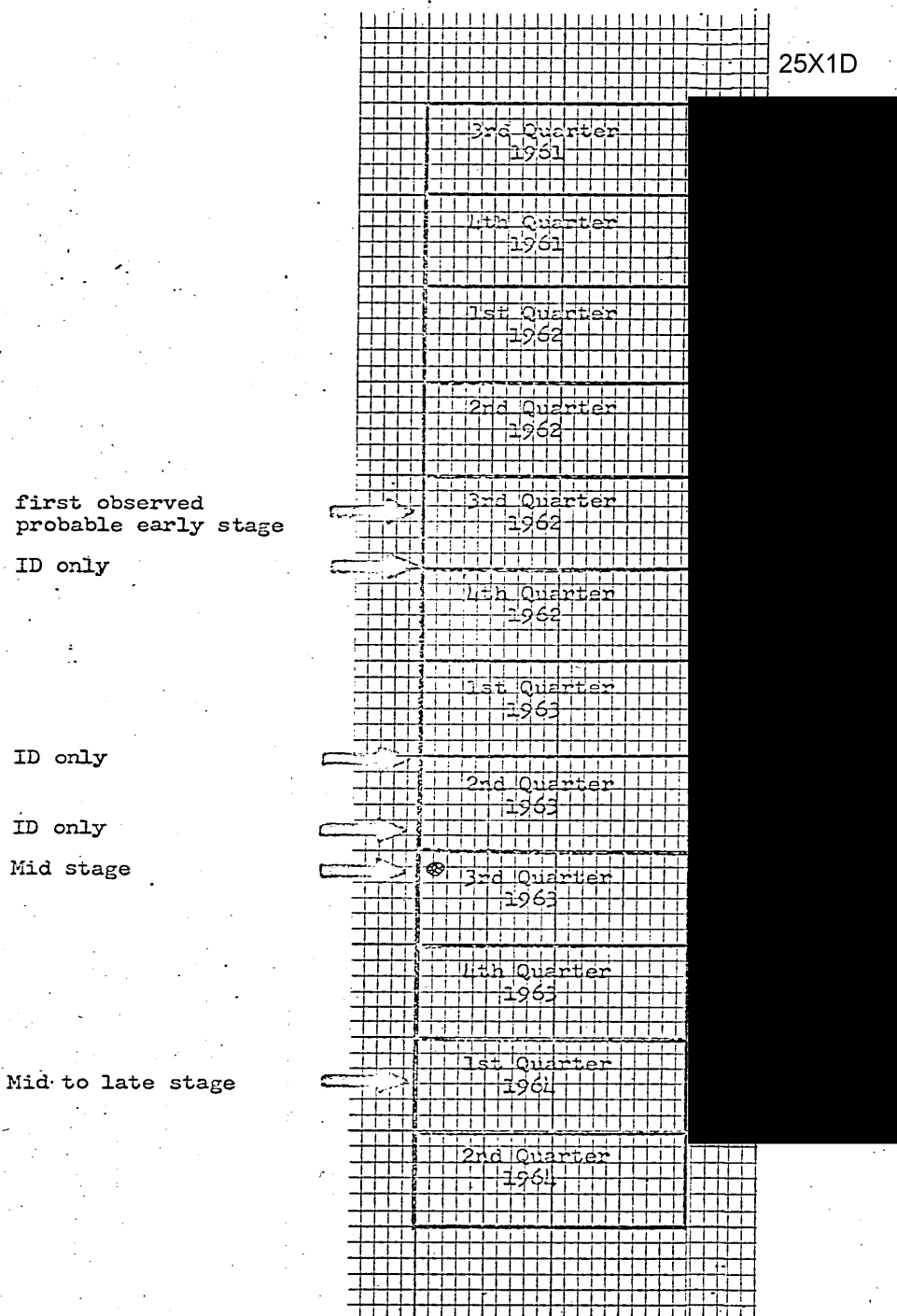


Figure IX-a

TOP SECRET NOF
SKORCON IREB LAUNCH AREA #3
54-26-15N 26-18-15E

25X1D

Items accentuated in black were
first observed on this mission.

Approximate scale:
1" equals 500'
(1:6000)

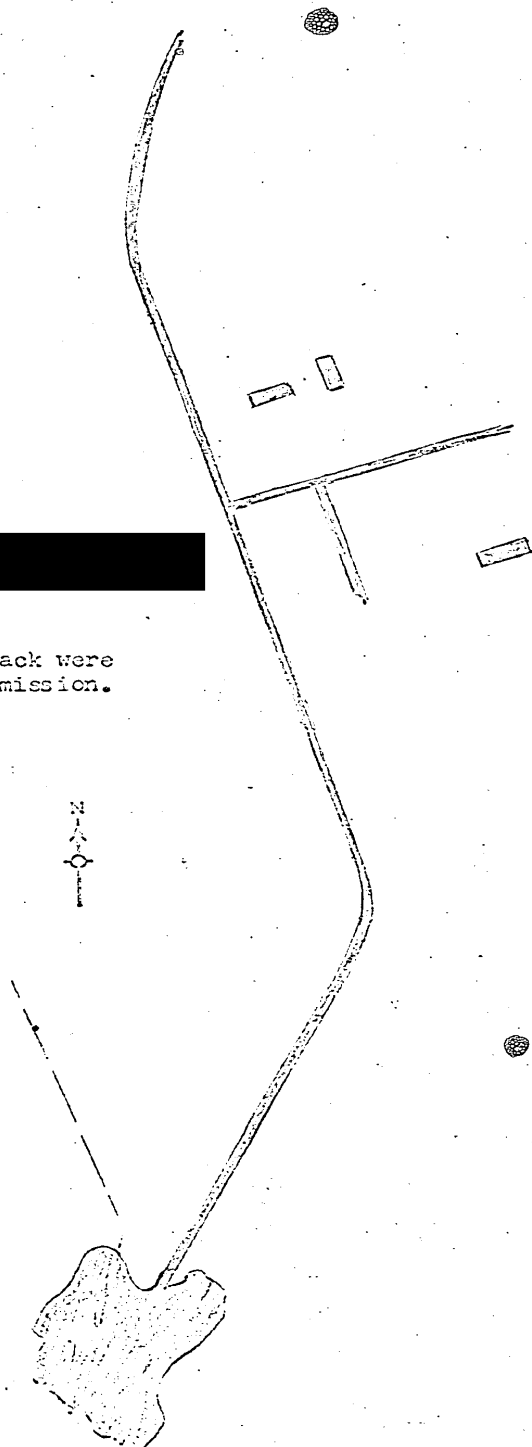


Figure IX-b

SMORGON INRM LAUNCH AREA #3
54-26-15N 26-18-15E

25X1D

Items accentuated in black were
first observed on this mission.

Approximate scale:
1" equals 500'
(1:6000)

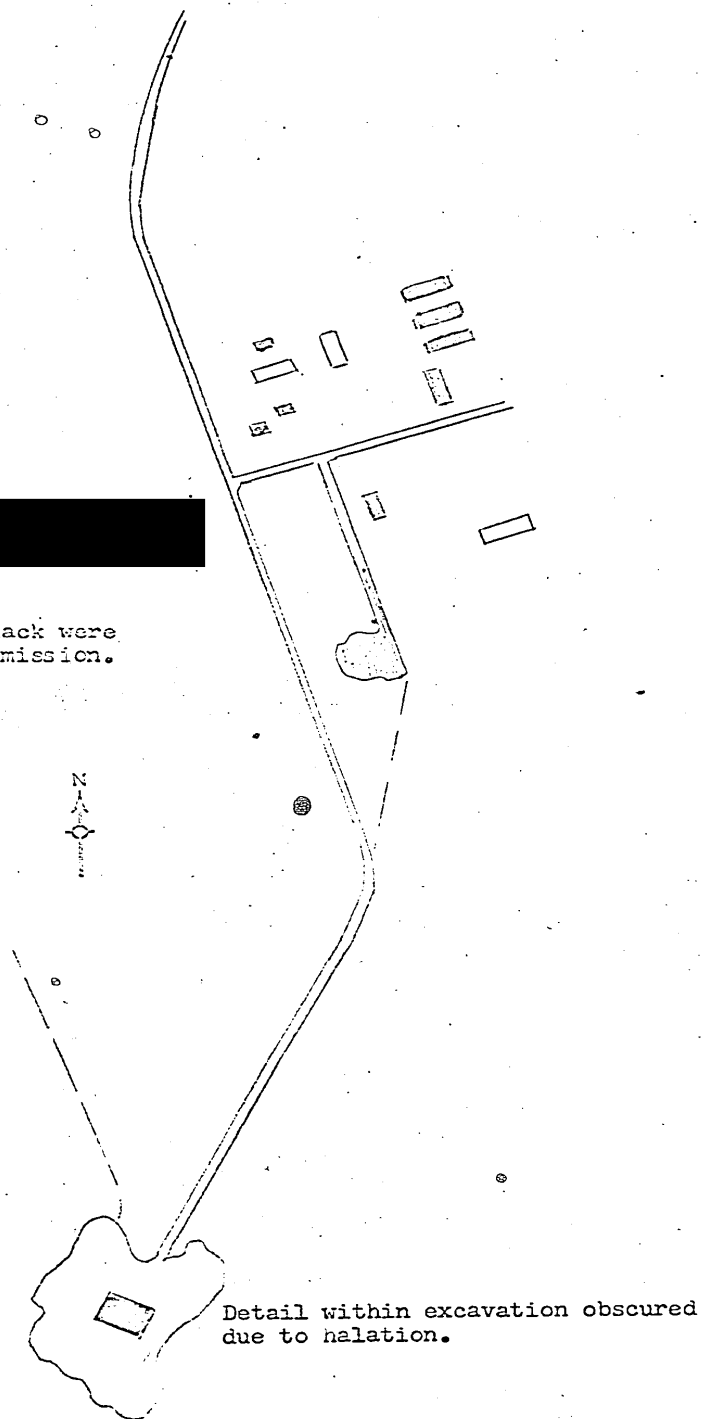


Figure IX-c

SMORGON IRBM LAUNCH AREA #3
54-26-15N 26-10-15E

25X1D

Items accentuated in black were
first observed on this mission.

Approximate scale:
1" equals 500'
(1:6000)

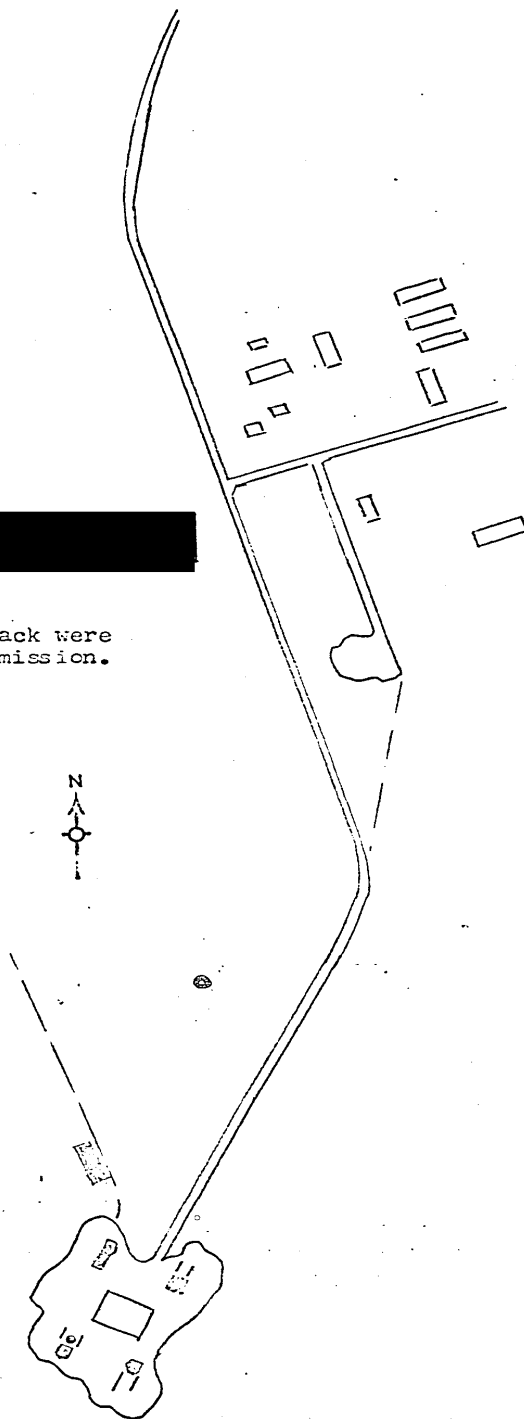


Figure IX-d

PHOTO COVERAGE BY MISSION AND STATUS OF CONSTRUCTION

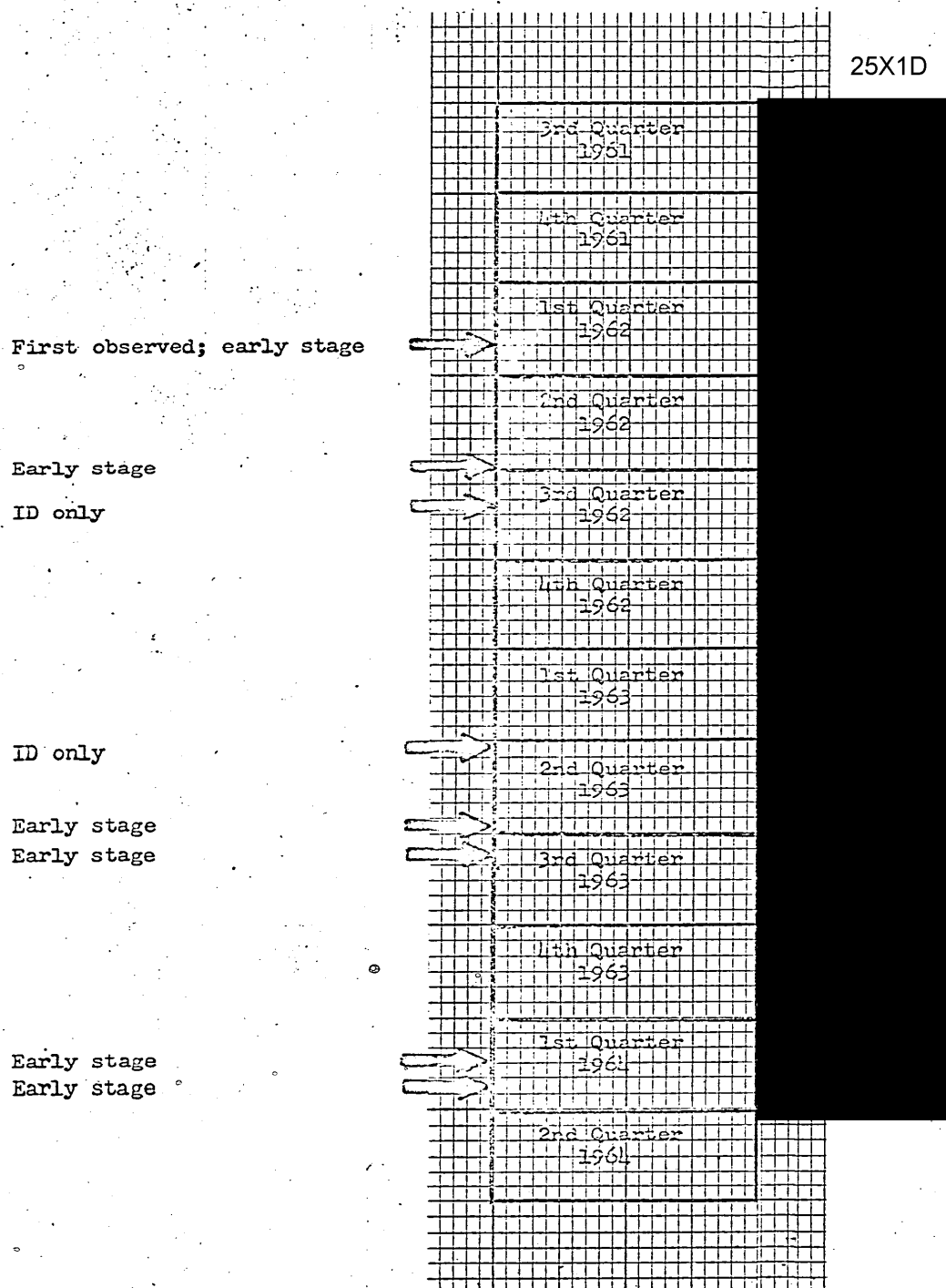
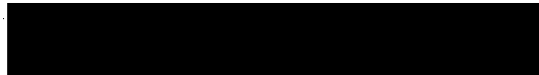


Figure X-a

TOP SECRET RUFF

TAYBOLA IRBM LAUNCH AREA #3
68-25-45N 33-29-30E

25X1D



Items accentuated in black
were first observed on this
mission.

Approximate scale:
1" equals 500'
(1:6000)



Figure X-b

CIA/PID/HEB-P-378/64

TOP SECRET RUFF

TOP SECRET RUFF

TAYBOLA IRBM LAUNCH AREA #3
68-25-45N 33-29-30E

25X1D



Items accentuated in black
were first observed on this
mission.

Approximate scale:
1" equals 500'
(1:6000)

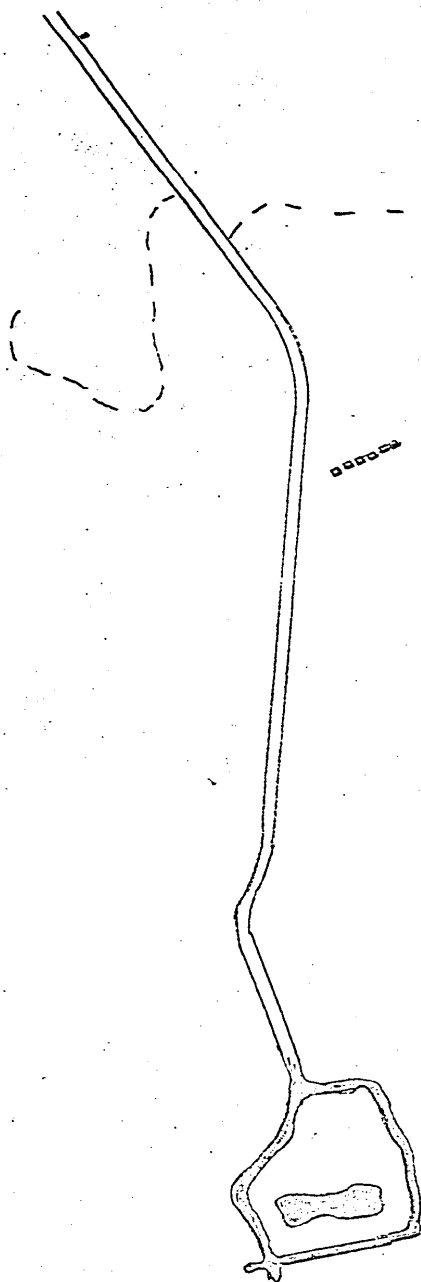


Figure X-c

TOP SECRET RUFF

CIA/PID/MEB-P-378/64

TOP SECRET RUFF

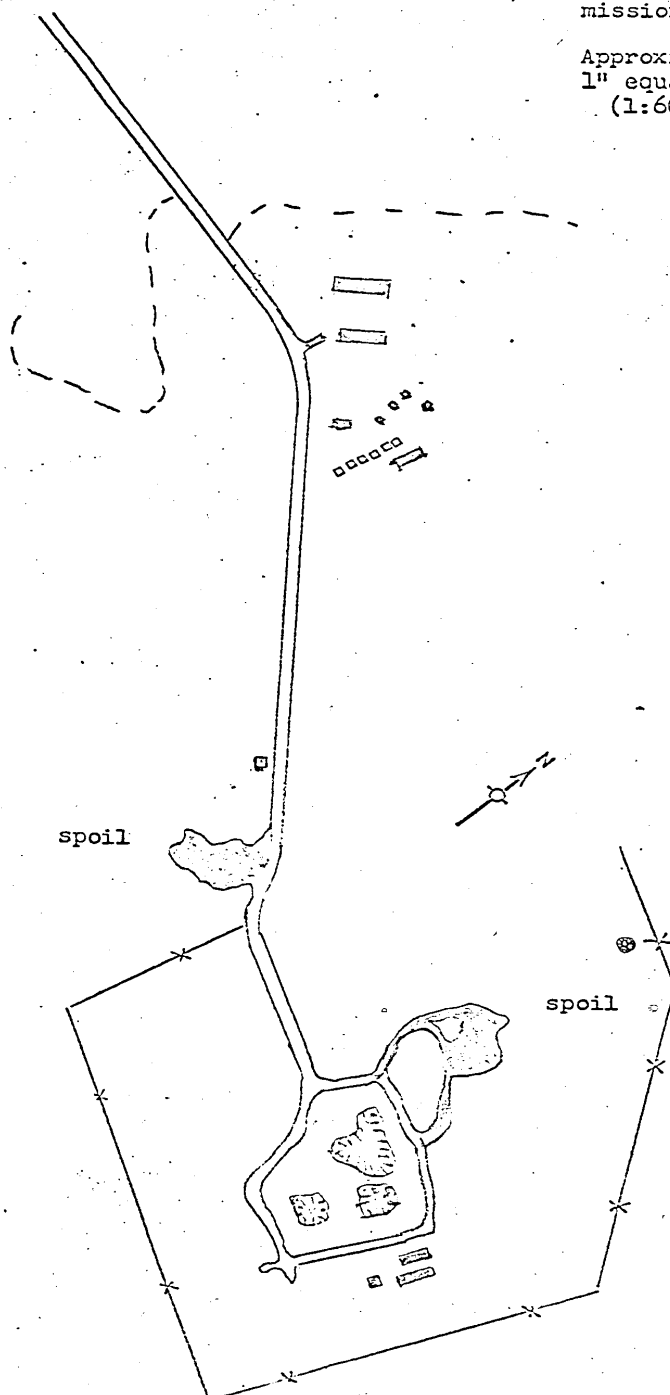
TAYBOLA IRBM LAUNCH AREA #3
68-25-45N 33-29-30E

25X1D



Items accentuated in black
were first observed on this
mission.

Approximate scale:
1" equals 500'
(1:6000)



TOP SECRET RUFF

Figure X-d

~~TOP SECRET~~

TAYBOLA IRBM LAUNCH AREA #3
68-25-45N 33-29-30E

25X1D



Items accentuated in black
were first observed on this
mission.

Approximate scale:
1" equals 500'
(1:6000)

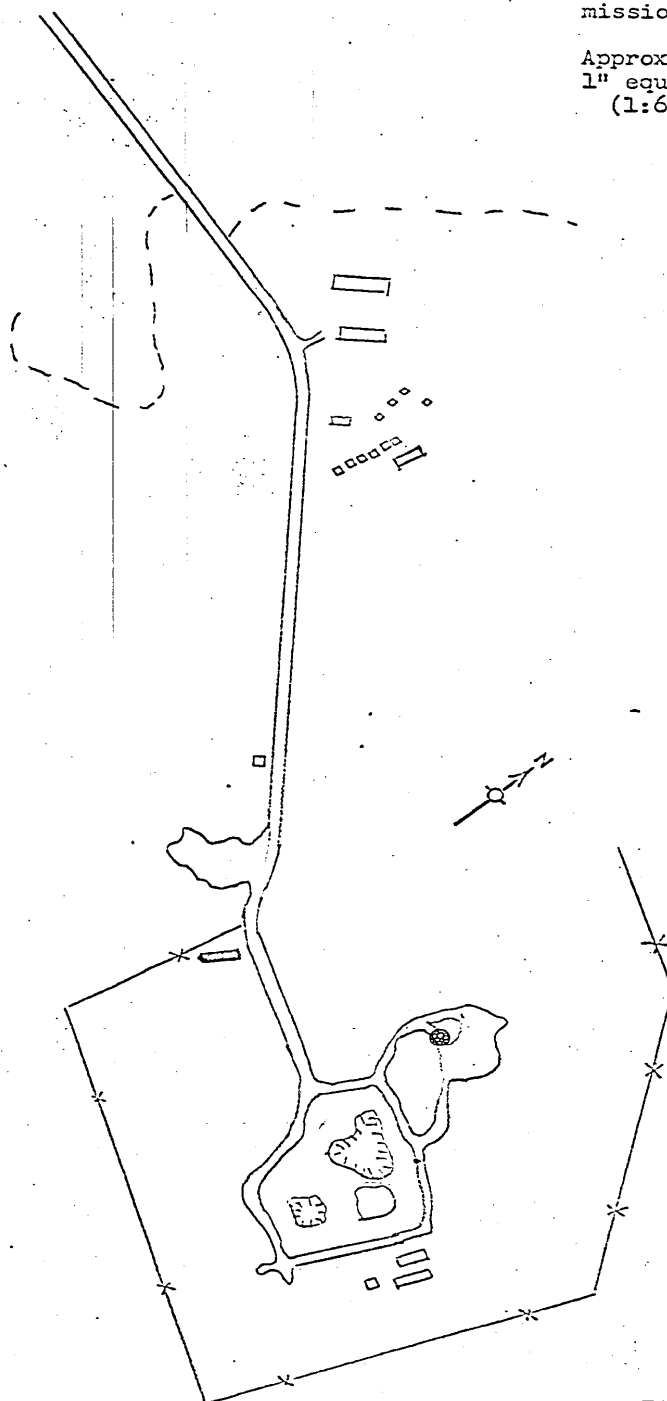


Figure X-c

~~TOP SECRET~~

CIA/PID/MEB-P-378/64

TOP SECRET RUFF

TAYBOLA IRBM LAUNCH AREA #3
68-25-45N 33-29-30E

25X1D



Items accentuated in black
were first observed on this
mission.

Approximate scale:
1" equals 500'
(1:6000)

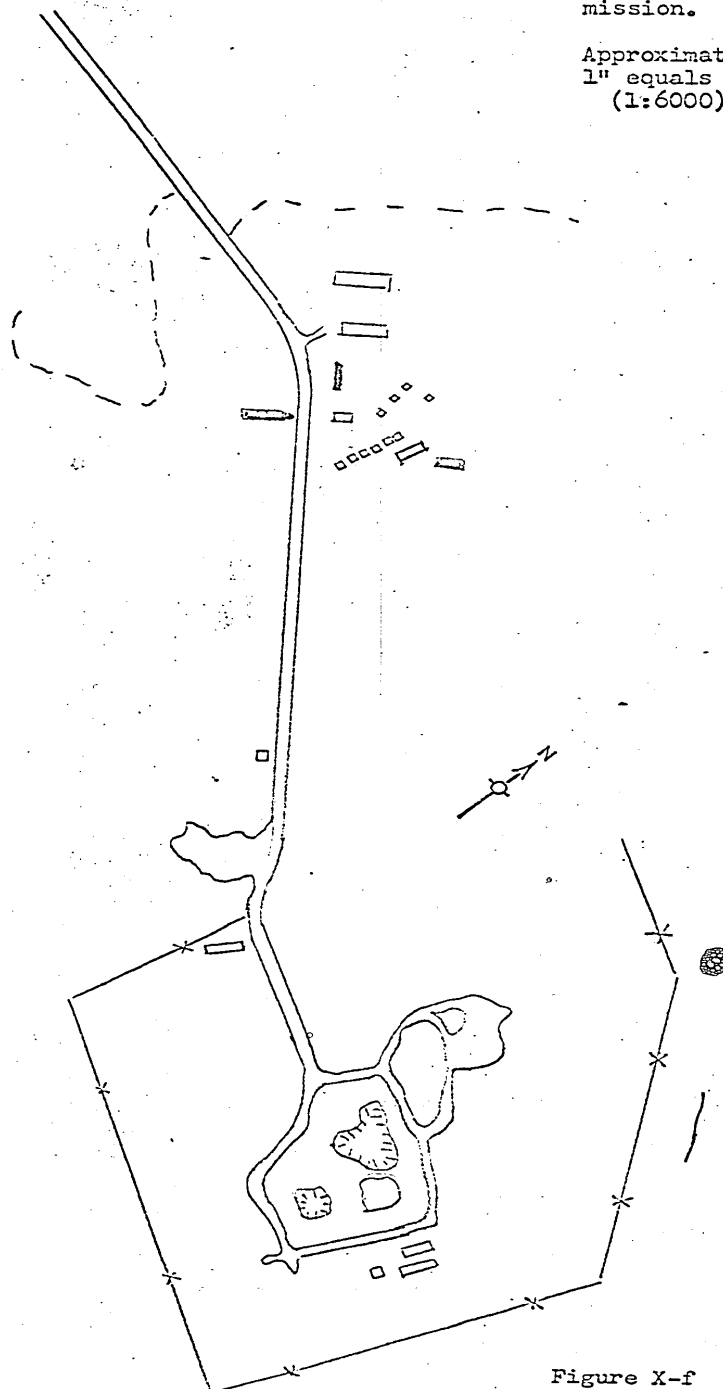


Figure X-f

TOP SECRET RUFF

TOP SECRET RUFF

TAYBOLA IRBM LAUNCH AREA #3
25X1D 68-25-45N 33-29-30E



Items accentuated in black
were first observed on this
mission.

Approximate scale:
1" equals 500'
(1:6000)

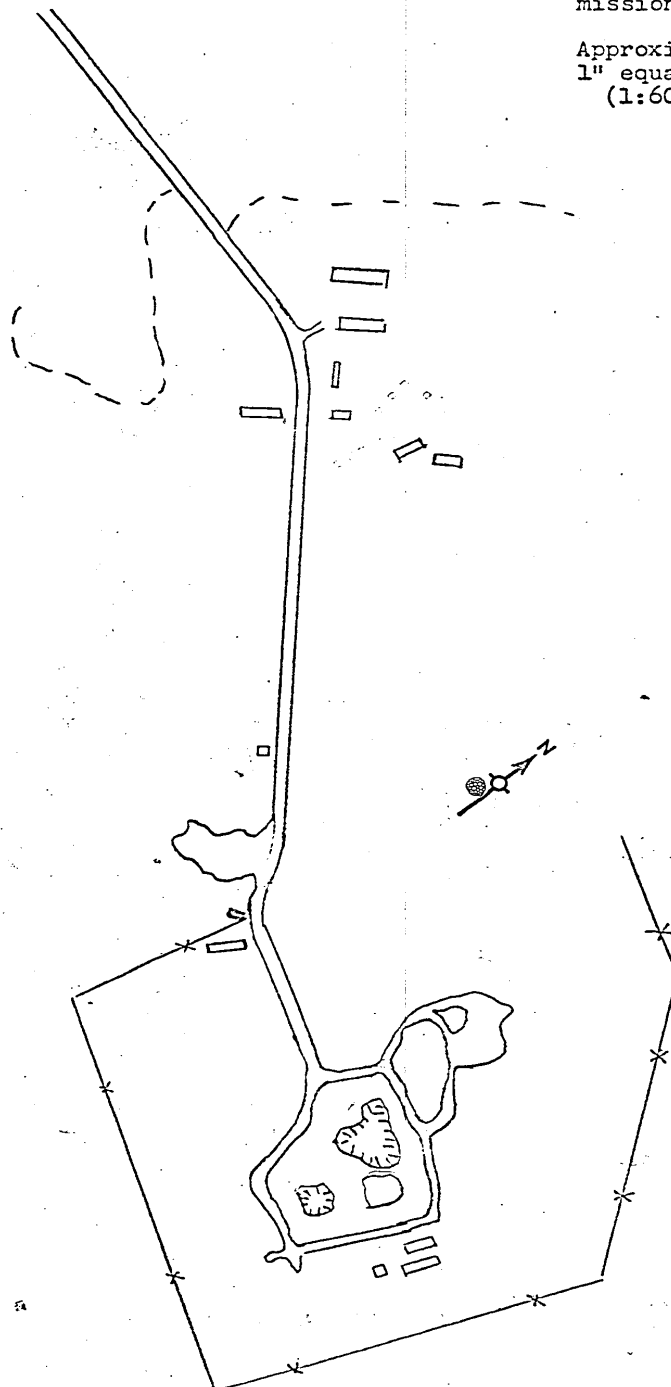


Figure X-g